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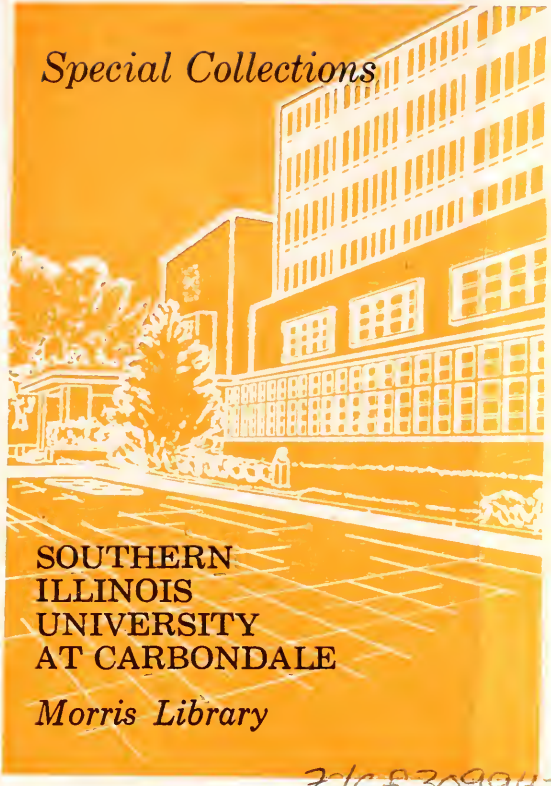

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THE WEST.

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THE WEST:

ITS

COMMERCE AND NAVIGATION.

BY JAMES HALL.

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THE WEST.

CHAPTER I.

The dignity and usefulness of Commerce, exemplified in the history of the Western States.

In estimating the relative standing and influence of the different classes of our population, there are, I think, two very grave mistakes usually committed: one of which assigns the highest place in the scale of merit to manual labor, while the other disdains, as low and coarse, all that partakes of physical exertion;—by the one class, the farmer, the laborer, and the mechanic, are lauded as wielding the creative power by which all the elements of wealth are brought into existence, by the other the members of the learned professions are revered as the depositories of all knowledge, the makers and arbiters of public opinion; and these respective classes have been courted and flattered, by those who have sought to rise upon the breath of popular favor.

The truth lies, I suppose, between these extremes. While we concede to the hard hand of labor a vast amount of power, utility, and consequent influence, and grant to intellect and education the force of a mighty lever, it will require but little reflection to satisfy us, that the resources of this country are controlled chiefly by that class, which, in our peculiar phraseology, we term "the

business community"—embracing all those who are engaged in the great occupations of buying and selling, exchanging, importing and exporting merchandise, and including the banker, the broker, and the underwriter. In a population so active as ours, and spread over so wide an expanse of territory, with lands so prolific, a climate so diversified, productions so various, mineral treasures so vast, and facilities for interior navigation so great, the pursuit of commerce must form a prominent occupation. The commercial and fiscal concerns of such a people cannot be otherwise than important. I have no hesitation in asserting that they employ more of the wealth, the industry, and the intellect, of the American people, than all other employments and professions united. Vast, and vastly diversified, they extend to every place, and are interwoven with every occupation. Commerce is limited only by the boundaries of civilized intercourse. Wherever men congregate in social life it is there; in the most obscure hamlet it is found among the first elements of the most simple form of society; in the proudest metropolis, it employs the highest energies of the human intellect, and is seen in the most magnificent displays of wealth and power. The vast navies that circumnavigate the globe are her's, great cities acknowledge her sway, her merchants are princes, the revenues of mighty nations are under her control. She is the arbitress of war and peace.

Under the influence of that fell spirit of demagoguism which has swept over our land, it has become fashionable to flatter the agricultural and laboring classes, because they are the most numerous, and wield the greatest power at the ballot boxes; while a systematic effort has been made, to decry the merchant and the banker, and to stigmatise their business as inimical to the liberty and

prosperity of the country. We might pass over these incendiary doctrines with the contempt they deserve, if it were it not for the wide spread mischief which they work, by deluding, to their own injury, the numerous classes whom they are intended to cajole and flatter. The laborer and mechanic are taught to dislike the banker, whose means furnish them with daily employment, and the farmer's mind is diligently imbued with a settled hatred for the merchant, without whose assistance his crops would rot upon the field. The prosperity of the country, its peace, its character, and its credit, are deeply affected by the too successful influence of these wretched intrigues. The masses are imbued with the opinion that wealth and poverty, commerce and labor, education and the want of education, constitute hostile interests; and the legislative halls are disgraced by an abject subserviency to those prejudices, which has banished justice, and patriotism, and manly freedom of thought, from that high sanctuary of sovereign power. Even the bench has not been free from these pernicious opinions, and demagogues have been found so hardened and so daring, as to carry into that sacred tribunal, the profligate pledge of party obedience, and to consummate there the atrocious proscription of individuals and classes.

It appears, by the census of 1840, that the number of persons in Ohio, engaged in Commerce, in Agriculture, and in Mechanical Labors and Trades, was as follows:

In Agriculture, - - - - -	272,579
Manufactures, Mechanics, and Trades, -	66,265
In Commerce, - - - - -	9,201

By this showing it appears that the disparity between these classes is very great, that the oppression attempted to be practised by the many over the few, is at least *safe*

to the agents employed in the experiment, and that however abject and unjust, however repugnant to the constitutional principles of equality and democracy, such appeals to the prejudices of the mass may be, the demagogues who use them, do so in the confidence of an impunity guarantied by an odds of thirty to one in their favor.

The streams of water which afford beneficent supplies of that necessary element to our city, are distributed by the force of a powerful engine. Situated at a distance, and silently performing its appointed office, its gigantic action is unobserved by the mass of human beings who enjoy the benefits of its incessant labor—who derive refreshment, comfort, health, and perhaps life itself, from its operations. Through the agency of that powerful machine, the healthful current circulates throughout all the avenues of the city; it is present in every street, it is used in every dwelling; yet the agent, that distributes a blessing so universal and indispensable, is by no means obvious to the casual observer. It is so with commerce; though its advantages are pre-eminent, and widely diffused, the number engaged in this profession is so small, in comparison with the aggregate of society, and their transactions, especially those of the greatest magnitude, attract so little attention, that the observation of the public is not awakened to a just appreciation of the mercantile character.

We might, indeed, appeal to the annals of the world, from the earliest times, to show that commerce has always led the van, in the great march of human improvement—in the discovery of new countries—in promoting the intercourse between nations—in affording employment to industry and ingenuity—in promoting science and diffusing knowledge—in adding to social comfort—in the spread of

civilization and christianity. I might refer to Greece and Rome, in the dark periods, when little else was regarded than fighting and the fine arts—to Venice and Genoa—to the brightest ages in the histories of Holland and of England—and to the whole history of America, from its discovery, until now, for proofs, that commerce is the most efficient agent of national prosperity. The occasion will not, however, allow me to enter upon so wide a field, and I shall confine myself to our own country, and to recent times.

Allow me then to occupy a few minutes in presenting some of the prominent facts in our history, for the purpose of inquiring what are the obligations of the country, to the class of our citizens who are engaged in commercial pursuits; and I am sorry that the subject is so broad and so varied in its details, that it is impossible to do it justice in the brief space of a single discourse.

The French, who first explored our northern frontier, ascended the great chain of lakes to Huron and Michigan, and afterwards penetrated through Lake Superior, to that remote wilderness, where the head branches of the St. Lawrence interlock with those of the Mississippi. Adopting, and probably improving, the bark canoe of the natives, they were enabled to traverse immeasurable wilds, which nature had seemed to have rendered inaccessible to man, by floods of water at one season, and masses of ice and snow at another, by the wide spread lakes, and ponds, and morasses, which in every direction intercepted the journey by land, and by the cataracts and rapids, which cut off the communication by water. All difficulties vanished before the efficiency of this little vessel: its wonderful buoyancy enabled it, though heavily freighted, to ride safely over the waves of the lakes, even in boister-

ous weather; its slender form and lightness of draught permitted it to navigate the smallest streams, and pass the narrowest channels; while its weight was so little, that it was easily carried on the shoulders of men from one stream to another. Thus when these intrepid navigators found the river channel closed by an impassable barrier, the boat was unloaded, the freight, which had previously been formed into suitable packages for that purpose, was carried round the obstruction by the boatmen, the boat itself performed the same journey, and then was again launched in its proper element. So, also, when a river had been traced up to its sources, and no longer furnished sufficient water for navigation, the accommodating bark canoe, like some amphibious monster, forsook the nearly exhausted channel, and traveled across the land to the nearest navigable stream. By this simple but admirable contrivance, the fur trade was secured, the great continent of North America was penetrated to its centre, through thousands of miles of wilderness, and a valuable staple brought to the marts of commerce. If we regard that little boat as the means of bringing to market this great mass of the treasures of the wilderness, we may well remark, that never was an important object effected by means so insignificant. But the human labor, and peril, and exposure—the courage, the enterprise, and the skill employed, were far from insignificant. The results were great. Besides the vast trade which was developed, the interior of a great continent was explored, the boundaries between two empires were traced out and incidentally established, an intercourse with the Indian tribes was opened, and valuable facts were added to the treasures of science. And all this was accomplished, not by the power of an empire, not by the march of a conqueror impelled by

military ambition or the lust of conquest—not by a lavish expenditure of money, or the shedding of human blood—but by the action of humble individuals acting under the great stimulus of commercial enterprise.

Turning our attention to another part of the great theatre of early adventure, we see the bold explorers, crossing from the Lakes to the Mississippi, passing down and up that river, tracing its gigantic course from the Gulf of Mexico to the Falls of St. Anthony—erecting forts, planting settlements, and, in short, establishing a chain of posts and colonies, extending from the mouth of the Mississippi, westward of the British Colonies, to the mouth of the St. Lawrence. The adventurers to Louisiana sought the precious metals; imaginary mines of gold and silver allured them across the ocean, led them to brave the terrors of the climate and the wilderness, and sustained them under the greatest extremes of toil and privation. Though disappointed in the object of their search, they became the founders of an empire, they explored and developed the resources of the country, they led the way to that flood of emigration which has been gradually filling up the land, and scattered the germs of that prosperity which we see blooming around us, and promising harvests too great to be estimated.

When the sagacious eye of Washington first beheld the country lying about the head waters of the Ohio, he saw and pointed out the military and commercial advantages which might be secured by its occupation. Had the annexation of this country to the American Colonies, or at a later period to the States, been made a political question, how various would have been the opinions, how deliberate the discussion, how slow the action, how uncertain the result! But this splendid example of national

aggrandizement was not achieved by the wisdom of statesmen, nor by the valor of armies. No sooner had a few daring pioneers settled in the wilderness, than the eager spirit of trade, ever on the watch for new fields of adventure, discovered the rich promise of gain offered by a region so wide and so fertile. Commerce did not then, nor in any instance, in the settlement of our country, wait until "grim visaged war had smoothed his wrinkled front," as is supposed to be her usual custom. However pacific in her tendencies, she did not shrink from a full participation of the perils of this glorious adventure. Following the footsteps of the pioneers, she came with the advance of the army of population.

The first settlements in the West were made by the backwoodsmen from Virginia and North Carolina, who were soon after followed by those of Pennsylvania and Maryland. New Jersey came next in the order of population; and from these sources originated that gallant band of pioneers who explored the country, drove back the savage, and opened the way for civilization. They were a daring, a simple, and an honest people, whose history is full of romance—but it is not with the romance of history that we have now to do. Simple and frugal as they were in their habits, they were still civilized men—branches of the great social circle whose centre glowed with the brightest refinements of life—and they had some artificial wants beyond the mere fruits of the earth and the products of the chase—while the country abounded in the crude materials which promised an abundant supply of articles for barter.

Wherever there is a prospect of gain, there will the adventurous feet of commerce thread their way, however dreary the path, however difficult or dangerous the road.

While the whole Alleghany ridge was still an unbroken mass of wilderness, trains of pack-horses might be seen climbing the mountain sides, by the winding bridle-path, threading the meanders of the valleys and gorges, trembling on the brinks of precipices, and sliding down the declivities, which scarcely afforded a secure footing to man or beast. They were laden with merchandise for traffic. The conductors were men inured to all the hardships which beset the traveler in the wilderness—men who united the craft of the hunter to the courage and the discipline of the soldier. For the road they traveled was the war-path of the Indian—it was the track that had been beaten smooth by the feet of them that sought the blood of the white man, and who still lurked in the way, bent on plunder and carnage. There was no resting place, no accommodation, no shelter. Throughout the day they plodded on, through the forest, scaling steep acclivities, fording rivers, enduring all the toils of an arduous march, and encamping at night in the wilderness; observing the precaution and the discipline of a military party in a hostile country. These were merchants, carrying their wares to the forts and settlements of the West; they were the pioneers of that commerce which now employs the wealth and controls the resources of an empire. They deserve a high place among the founders of Western settlements, as they furnished the supplies of arms, ammunition, clothing, and other necessaries, which enabled the inhabitants of the frontier to sustain themselves against the hostilities of numerous tribes of Indians, incited to war by British influence, and supplied with the implements and appliances of savage warfare, by the agents of the same humane and enlightened people.

The first boats used in the navigation of the Western

rivers, were the flat boat, the keel, and the barge the first of which was only used in descending with the current, while the two latter ascended the streams, propelled laboriously by poles. Navigating long rivers whose shores were still infested by hostile savages, the boatmen were armed, and depended for safety upon their caution, and their manhood. Mike Fink, the last of the boatmen, was an excellent marksman, and was as proud of his ability to defend his boat, as of his skill to conduct it through the rapids and windings of the navigation. The Indians, lurking along the shore, used many stratagems to decoy the passengers and crews of the boats to land, and those who were unsuspicious enough to be thus deceived, fell an easy prey to the marauder. Under the best circumstances these boats were slow, and difficult to manage, the cost of freight was enormous, and the means of communication uncertain.

The application of steam power to the purposes of navigation, forms the brightest era in the history of this country. It is that which has contributed more than any other event or cause, to the rapid growth of our population, and the almost miraculous development of our resources. We need not pause to inquire whether the honor of the invention be due to Fitch, to Rumsey, or to Fulton,—for that inquiry is not involved in the discussion in which we are now engaged. But if we seek for the efficient patron of this all powerful agent in the West—for the power that adopted, fostered, improved, and developed it—from an unpromising beginning, through discouragement, failure, disappointment—through peril of life, vast expenditure of money, and ruinous loss, to the most complete and brilliant success—we are again referred to the liberal spirit of commercial enterprise. Science pointed the way, but

she did no more; it was the wealth of the Western merchant, and the skill of the Western mechanic, that wrought ought the experiment to a successful issue. The first fruits of the enterprise were far from encouraging; failure after failure attested the numerous and embarrassing difficulties by which it was surrounded. For although all the early boats were capable of being propelled through the water, and although the last was usually better than those which preceded it, it was long a doubtful question, whether the invention could be made practically useful upon our Western rivers; and it was not until five years of experiment, and the building of nine expensive steamboats, that the public mind was convinced by the brilliant exploit of the *Washington*, which made the trip from Louisville to New Orleans and back in forty-five days.

The improvements in this mode of navigation since then have been surprising. The voyage from New Orleans to Louisville has been made in less than six days. The trip from Cincinnati to New Orleans and back is made easily in two weeks. During the high water, in the spring of 1846, the trip from Pittsburgh to Cincinnati was made in twenty-seven hours, and the packet boats between these places have now regular days and hours of departure.

Explosions and other destructive casualties have become rare, and the navigation is now safe, except only from obstructions existing in the channels of the rivers. All that skill, enterprise, and public spirit could do, to bring this navigation to perfection, has been done by the liberal proprietors of steamboats. The wealth of individuals has been freely contributed, while that of the government has been withheld with a degree of injustice which has scarcely a parallel in the annals of civilized legisla-

tion. The history of man does not exhibit a spectacle of such rapid advancement in population, wealth, industry, and refinement, such energy, perseverance, and enlightened public spirit on the part of individuals, as is exhibited in the progress of the western people—nor of so parsimonious and sluggish a spirit as that evinced towards us by the government. All that we have, and are, are our own, created by ourselves, unaided by a government to whose resources and power we are now the largest contributors. We build and maintain a fleet of five hundred steamboats, bearing annually a freightage of more than two hundred millions of dollars—while we are subjected to an immense yearly loss of life and property, from the narrow and unwise refusal of the government to make a comparatively small expenditure to remove obstructions from the channels of rivers, over which it has the sole jurisdiction.

By our own unaided exertions we have now actively employed, in the transportation of passengers and merchandise, more than five hundred steamboats, worth ten millions of dollars, having the capacity of one hundred thousand tons, and plying upon a connected chain of river navigation of twelve thousand miles in extent.

The value of the exports and imports, floating on the western waters annually, has been estimated at two hundred and twenty millions of dollars, consisting of the products of our soil and manufactures on the one hand, and of the fabrics of foreign countries upon the other, all bought with the money of our merchants, and by them thrown into the channels of trade.

If the mercantile class had rendered no other service to our country, than that of introducing and fostering the agency of steam, in navigation and manufactures, they

would have entitled themselves to more lasting gratitude and honor, than the most illustrious statesman or hero has ever earned from the justice and the enthusiasm of his country.

Previous to the year 1817, the whole commerce from New Orleans to the upper country was carried in about twenty barges, averaging one hundred tons each, and making but one trip in the year, so that the importations from New Orleans, in one year, could not have much exceeded the freight brought up by one of our largest steamboats in the course of a season. On the upper Ohio, there were about one hundred and fifty keelboats, of about thirty tons each, which made the voyage from Pittsburgh to Louisville and back in two months, or about three such trips in the year. That was but thirty years ago, and need I pause to inquire what would have been the probable condition of our country, at this time, had our commerce continued to be dependant upon such insufficient means of conveyance?

The pioneers were a noble race, and well did they discharge the part assigned them. They led the way into the wilderness. They scaled the ramparts of the Alleghany mountains, that seemed to have been erected as barriers against the footsteps of civilized men. They beat back the savage and possessed the country. Their lives were full of peril and daring; their deeds are replete with romance.

The farmers, who have subdued the wilderness, are hardy and laborious men, who have been well designated as the bone and muscle of the country. They have cheerfully encountered obstacles from which a less resolute body of men would have shrunk in despair, and have won the

fruitful fields which they possess through toils and dangers such as rarely fall to the lot of the husbandman.

But without detracting from the merits of either of these classes, what would this country have been now, without commerce? Suppose its rural population had been left to struggle with the wilderness without the aid of the numberless appliances which have been brought to their doors by the spirit of trade, to what point would their population and their prosperity have risen? Without money, without steamboats, canals, railroads, turnpikes, and other facilities for transportation, what would have been the destiny of our broad and fertile plains? Desert and blooming, they would have sustained a scattered population, rich in flocks and herds—a roaming, pastoral people, whose numbers would have grown by the natural increase; while the country would have remained unimproved, and its rich resources locked in the bosom of the earth. But commerce came, bringing them a market for their products, offering rich rewards to industry, and stimulating labor to the highest point of exertion. She brought with her money, and the various representatives of money, established credit, confidence, commercial intercourse, united action, and mutuality of interest. Through her influence the forests were penetrated by roads, bridges were thrown over rivers, and highways constructed through dreary morasses. Traveling was rendered easy and transportation cheap. Through this influence the earth was made to yield its mineral treasures; iron, lead, copper, coal, salt, saltpetre, and various other products of the mine, have been taken from our soil, and brought into common use. Our agricultural products have increased, and are daily and hourly increasing, in variety and value; while in every village is seen the smoke of the manufactory,

and heard the cheerful sounds of the engine and the hammer.

Such have been the trophies of commerce; and still the same salutary spirit is abroad in our land. There is no page in the history of our country more surprising, or richer in the romance of real life, than that which depicts the adventures and the perils of the traders and trappers in the wilderness beyond our Western frontier. Leaving St. Louis in large parties, well mounted and armed, they go forth with the cheerfulness of men in pursuit of pleasure. Yet their whole lives are full of danger, privation, and hardship. Crossing the wide prairies, and directing their steps to the Rocky Mountains, they remain months and even years in those savage wilds, living in the open air, without shelter, with no food but such game as the wilderness affords, eaten without bread or salt, setting their traps for beaver and otter in the mountain streams, and fighting continually with the grizzly bear, and the Indian—their lives are a long series of warfare and watching, of privation and danger. These daring men secure to us the fur trade, while they explore the unknown regions beyond our borders, and are the pioneers in the expansion of our territory.

So, too, of the caravans which annually pass from St. Louis across the great plains to Santa Fe. Their purpose is trade. They carry large amounts of valuable merchandise to the Mexican dominions, and bring back rich returns. But like the trapper, they go armed for battle, and prepared to encounter all the dangers of the wilderness. And here, too, we see the spirit of trade animated by an intelligent enterprise, and sustained by a daring courage, and an invincible perseverance.

There are many persons still living who bear in their

memories the records of the last fifty years, so fraught with those momentous events, which have disturbed the repose of the world, or advanced the progress of man. The rise of Napoleon, the expansion of that gigantic military power, which had nearly conquered Europe, the lavish expenditure of blood and treasure, by that mighty conqueror, that man of brilliant genius and stubborn will, are still recent events. Within that period, kingdoms were overrun, nations conquered, crowns transferred;—and who can forget the pomp, the circumstance, the terror, the dreadful carnage, that attended those great national changes?

Within the same period, the great plain of the Mississippi was a wilderness, embracing a few feeble and widely scattered colonies. Here also arose a mighty conqueror, more powerful than an army with banners. A vast region has been overrun and subdued. The mountains have been scaled—the hills have been leveled, and the valleys filled up, and the rough ways made smooth, to admit the ingress of the invaders. The land has been taken. A broad expanse, extending over twelve degrees from North to South, and ten degrees from East to West, has been rescued from the dominion of nature, and from the hand of the savage, and brought under subjection to the laws of social subordination. A population of seven millions has been planted upon the soil. Cities have grown up on the plains, the fields are rich with harvests, and the rivers bear the rich freights of commerce. This has nearly all been effected without the horrors of war, without national violence, without the domestic affliction usually attendant on the train of conquest. The conquests of the warlike Emperor have vanished, and his greatness perished like an airy fabric: while a commercial people,

using only pacific means, have gained an empire whose breath and wealth might satisfy the ambition of even a Napoleon. They have gained it by labor, by money, and by credit—by the muscular exertion of the farmer and mechanic, aided by mercantile enterprise, and fiscal ability.

The great West has now a commerce within its own limits, as valuable as that which floats on the ocean between the United States and Europe. In that wide land, where so lately the beaver and honey bee were the only representatives of labor, and a painted savage the type of manhood, we manufacture all the necessaries of life, letters and the fine arts are cultivated, and beauty and fashion bloom around us.

We have, in the West and South-West, an incorporated banking capital of fifty millions of dollars, affording, with its circulation of notes, a capital of about one hundred millions of dollars for business; and however the demagogue may rail against these institutions, there can be no question, that their capital is so much actual power, wielded by the commercial class, for the benefit of the whole country. The poor may envy the rich the possession of that of which they feel the want, the demagogue may decry credit, for the same reason, but the truth is that this country has grown rich through the money of banks, and the enterprise of merchants. The farmer has been the greatest gainer from the general prosperity. Commerce has supplied money to purchase his products; the building of mills, the creation of roads, canals, and steamboats, are due to the enterprise of commerce, but they bring a market to the farmer. The agricultural products, which but a few years ago were not worth the labor of

production, are now sources of wealth to the farmer—of vast aggregated wealth to the State.

In 1795, when the troops of Wayne triumphed over a numerous Indian force, the whole territory of Ohio was a wilderness; now we have a population of two millions, actively engaged in the various pursuits of industry, a country rich in resources, highly improved, and intersected in every direction by turnpike roads, railroads, and canals; the aggregate extent of the artificial communications made by the State being over fifteen hundred miles, and their cost more than fourteen millions of dollars. And these are not military roads, constructed by the patronage of the government, neither are they the highways of a rural people, required for the purposes of social intercourse—they are the avenues of commerce, the arteries of our great commercial system, through which wealth and property circulate throughout the broad land, nourishing its prosperity into healthful and lusty vigor—created by the wants, the influence, and the wealth of commerce.

Fifty years ago the national flag waved over a lone fortress surrounded by a few log huts, on the spot we now occupy. Around it was the unbroken forest, penetrated only by the war-path of the Indian, and the track of the buffalo. Standing upon the ramparts of that fort, the eye of the beholder would have rested on the pristine verdure of the luxuriant forest, and on the placid stream of the Ohio, seldom disturbed, even by the light craft which then floated on her bosom—his ear would have heard at dawn the martial notes of the reveille, and at night the hooting of the owl, and the savage bay of the prowling wolf. Now we stand upon the same spot, in the centre of a populous city, surrounded by all the refinements of

wealth and cultivation—a city numbering, with its suburbs, nearly one hundred thousand souls, and embracing a vast amount of the industry, the energy, and the excitement of business. Situated in the midst of a great agricultural region, with natural avenues, and artificial roads tending to it in every direction, it is unsurpassed as a market for the products of husbandry. The wonderful statistics of one of our staples, have obscured the other elements of our prosperity from observation, and we are known chiefly by the fame of the three hundred thousand hogs, packed annually, at our pork houses, for exportation. Our exports of beef, flour, whisky, butter, and other provisions, are equally abundant, and the aggregate is so great, as to make this the greatest provision market in the world. But even this is but a part of our business. Among our population, we number ten thousand operatives engaged in manufacturing and the mechanic arts, who make a great variety of articles of wood, iron, brass, copper, tin, leather, cotton, wool, and other materials, making in all about one hundred and fifty different and distinct branches of manufacture, and the annual value of whose products is about twenty millions of dollars. Among these are an average of thirty steamboats, which are built annually at a cost of five hundred thousand dollars.

The capital invested in commerce in this city is said to amount also to above twenty millions of dollars, so that our trade and manufactures bear nearly equal proportions to each other.

The citizens of Cincinnati have shown great public spirit in the construction of railroads, turnpikes, and canals, leading into the city. There are now no less than sixteen principal avenues concentrating here, the

aggregate length of which is one thousand one hundred and twenty-five miles, and which will have cost twelve millions of dollars when completed, a liberal portion of which has been subscribed by the city in its municipal character, and by public spirited citizens. All these were made for the transit of merchandise; they were made by commercial enterprise and liberality, for the benefit of commerce.

If I have been successful in showing that our prosperity has resulted from the enterprise of individuals, it will be readily seen that we owe it chiefly to the commercial class. Not that I would claim for them the sole honor, or deny the merits of others, for this would be as unreasonable as the fabulous dispute between the body and the limbs. I only place them in the foremost rank of an active, hardy, adventurous population, because, by controlling the wealth, the business, and the resources of the country, they have been the chief agents in its rapid aggrandizement.

Such being the sphere and influence of the merchant, we feel at liberty to call the attention of the intelligent class, who exercise that profession, to a very interesting point connected with that subject. It is one of paramount importance, and should receive a much more attentive consideration than can be given to it incidentally, in this place. As a body they have been traduced and proscribed, their interests neglected, and their rights invaded, by those who sway the political power of the country. The industrious and enterprising are not popular with the demagogues, who seek to live upon the favor of the people without enterprise or industry. The honest and laborious man of business has no sympathies in common with the mere politician, the party hack. But though

thus decried, the mercantile body have the possession of a vast amount of property, the direction of varied transactions, pervading every part of the land, and an influence which, though indirect, is very great.

What should be the character of those who act so important a part in the business of the country, who control its resourses, direct its energies, and in a great degree form the moral standard which regulates the transactions of the whole people? The mercantile mind of our country is sufficiently keen. The pursuit of wealth, attracting as it does intellects of every grade, includes among its votaries many of the most aspiring and most capable minds; and gives to them that constant and healthy exercise, which is calculated to sharpen the faculties, and if united with reading and reflection, produces a high degree of refinement. The merchant should cultivate his mind, and acquire knowledge, as an element of power. Dealing in the products of various climes, and of all the arts, and engaged in an intercourse, personally or by correspondence, which extends to all the marts of traffic throughout the world, he should be well acquainted with the geography of the globe, and with the productions, resources, habits, financial systems, and commercial usages of all nations. He should know thoroughly the composition and history, the mode of production, cost, and all other incidents, connected with every article in which he deals; and should be versed especially in the moneys and measures, the exchanges, the commercial laws and regulations, of the various places to which his business relations extend. This much we insist upon, as actually necessary to the respectability of the mercantile character, and to enable the merchant to wield his capital to advantage.

But the intelligent merchant should aspire to more than this. His position in society demands that he should place himself upon an equality with the most cultivated of his fellow citizens. As a class, the merchants are the most wealthy men of our country. In social intercourse they mingle with the most refined, with those who are highest in intellectual standing, and official position. There is no place in society, no post in the government, from which the merchant is excluded. On the contrary, his command of money, and the facilites afforded by his relations of business, place him in a prominent position, give him the control of the various commercial and moneyed institutions, and render him the fit and active director and agent in the whole circle of public charities, and in the numberless endowments for literary and liberal purposes. Having thus opened to him a wide sphere of usefulness, he should enter upon it with a consciousness of its dignity and importance, and qualify himself for the discharge of its duties, by an assiduous and a liberal cultivation of his mind and morals.

The merchant should be a patron of the arts, a promoter of education, a friend of literature and science, an active agent in all public improvements; because his habits of business, his wealth, his connection with moneyed institutions, and with fiscal concerns, enable him to render efficient aid to enterprises of patriotism and benevolence. He should be forward in every good word and work, also, as a means of blunting that vulgar prejudice, which supposes that the men who possess or control wealth enjoy exclusive privileges; and should show a willingness to pay liberally for the advantages of his position, whether real or imaginary, by using those advantages freely for the public good.

There is another point, in regard to the commercial character, of greater delicacy, but which I do not feel at liberty to pass untouched, as it is the most essential to the honor and the prosperity of the mercantile class, as well as of the community to which they belong. The most precious posssession of the merchant is his *credit.* And here allow me to draw a distinction: the credit of the merchant does not consist simply in his wealth, or in his ability to borrow money by means of his connections, or of the securities he may be able to offer. It is a gross fallacy to suppose that what is termed an "undoubted standing," requires nothing for its support but the possession of *facilities* for raising money. The credit of a merchant depends mainly on his character for integrity, capacity, and industry. The true merchant is a man whose morality is as inflexible as the rules of arithmetic: his honesty is as invariable as the result of a correct balance-sheet. He should be not only honest, but strictly honorable, so that the confidence reposed in him should be unlimited. Such a man is trusted, not merely on account of his wealth, but in consideration of his personal character.

The commercial virtues are so essential to the well being of society, that their cultivation should be an object of sedulous care to the whole mercantile body, who should exercise a conservative influence by frowning upon every infraction of the laws of fair trading. Punctuality should be insisted upon as an indispensable requisite, and no man should be trusted or tolerated, who would forfeit his word, or violate his engagements. Society has a right to demand of all its members the observance of good faith, and it is only by insisting on this right that a wholesome public opinion is established.

Especially should the merchants of a city like ours, endeavor to establish a high tone of commercial character. They should set up a standard of strict and elevated morality, which every regular dealer and fair merchant would acknowledge to be just, and to which all should be required to adhere. They should patronise those virtues which adorn the individual character, which promote success in business, while they render its transaction safe and agreeable, and which are as beneficial as they are honorable to the community in which they flourish—industry, honesty, temperance, and prudent economy; while, by inflexible rules, and strict observances, they should discountenance frand, deception, trickery, and bad faith.

When we speak of the rapid advancement of our country to its present high state of prosperity, we are easily led by national vanity into the employment of high sounding words which do not always lead us to satisfactory conclusions. Patriotism, public spirit, benevolence—liberty, education, the freedom of the press, our liberal institutions, the benign and pacific policy of our government, are referred to as causes of our national growth and aggrandisement. I shall not dispute the happy influence of all these principles. But there is one element in the national character, one principle of action animating the entire mass of our people, which is greater than any other; nay, I will be bold enough to assert more powerful than all others united. Whether it be called avarice, or the love of money, or the desire of gain, or the lust of wealth, or whether it be softened to the ear under the more guarded terms, prudence, natural affection, diligence in business, or the conscientious improvement of time and talents—it is still *money-making* which constitutes the great business

of the majority of our people—it is the use of money which controls and regulates every thing.

Whether the propensity for money-getting is beneficial or otherwise, depends upon circumstances. Industry is an admirable quality; its exercise is directly useful to the public as well as to individual interests, and it is accompanied by temperance, prudence, morality, and other virtues. But the desire of wealth, for its own sake, is far from being a virtue. Where money is greedily sought, without regard to the means of acquisition, and without liberality in its expenditure, the passion which directs its pursuit is base and sordid. The miser is a wretched man, a worthless citizen, a dishonor to the dignity of human nature.

I am happy to believe that the acquisition of wealth does not necessarily, nor as I hope usually, blunt the sensibilities, nor destroy the manliness of a generous character—that it is not always a selfish and a mercenary occupation. If money be sought with moderation, by honorable means, and with a due regard to the public good, no employment affords exercise to higher or nobler powers of the mind and heart. And such should be the character of the merchant. He should guard his heart against the seductive influence of money; he should carefully shield his mind against the narrow precepts of avarice. Money should be regarded as the agent and representative of the good it may be made to perform—it should be sought as the instrument of self-defence against the evils of poverty, of parental love, enabling us to provide for those dependent on us, of public spirit, in affording the means of promoting the public good.

CHAPTER II.

The navigation of the Western rivers—its extent and importance—its connections with the ocean, and the Atlantic States.

The inhabitants of the Western and South Western States are deeply interested in the trade and navigation of the Ohio and Mississippi Rivers. Inhabiting a country of great magnitude, and unsurpassed fertility, rich in all the products of nature, and of unbounded resources, our commerce, already great, is daily swelling in value and mportance. The plain of the Mississippi, extending from the 29th to the 47th degree of North Latitude, embraces not only all the productions of the temperate zone, but many of those of the frigid regions of the North, and of the sunny climate of the tropic; so that those who inhabit the shores of this gigantic river and its tributaries, carry on already an interchange of domestic products and manufactures, which in itself constitutes a most extensive traffic, and includes a great variety of the staples of commerce. But when to this is added all that we export to foreign markets, and import for home consumption, the variety and value of this immense internal trade will be found to assume an importance which should recommend it to the serious attention of the American people, and the National government.

In estimating the importance of the navigation of the Ohio and Mississippi rivers, it is necessary to invite attention to a few prominent facts, which we shall collect

from the most authentic sources. The region drained by those rivers and their tributaries extends from the twenty-ninth to the forty-seventh degree of North Latitude, and from the Allegheny to the Rocky Mountains. Vast in its proportions; it is not less magnificent in its natural resources, facilities for commerce, and ability to support a numerous population.

The valley of the Ohio, or the country drained by the river Ohio and its tributaries, embraces a territory of over one million square miles, or six-hundred and forty million acres, of land of unsurpassed fertility. This area exceeds, by several thousand square miles, that of Great Britain and Ireland, and is little less than that of France. The population of Great Britain and Ireland is twenty-six millions, that of France thirty-three millions, and we have less unproductive land in this valley than in either of those countries, with agricultural and mineral resources equal to either. We can therefore support, in this valley, twenty-five millions of population in comfort and plenty.

If the whole Mississippi valley had a population equal to that of Massachusetts, say eighty-two to the square mile, it would contain nearly one hundred millions souls, about six times the population of the United States at the last census, and one seventh of the probable population of the globe.

The same region is ten times as large as Great Britain, and, if populated as densely as that island, would contain two hundred and twenty-two millions of inhabitants.

The portion of that territory already inhabited, and organised under civil government, may be stated, with sufficient accuracy, in round numbers, as embracing an average length from North to South of twelve degrees, and a breadth of ten degrees, which would give an area of four hundred and thirty-two thousand square miles. And

it is worthy of remark, that such is the wonderful fertility of this country, its mineral wealth, its abundant resources, and its advantages of climate and navigation, and so great are the enterprise of its people, and the increase of population from abroad, that any rational statement of its limits or its wealth, founded upon evidence, must fall far short of the truth. It is a new country, imbued with all the characteristics of a vigorous youth, and possessing extraordinary elements of expansion and improvement. Every day is extending its limits, filling up its vacant places, and developing its latent resources, and not a season passes which does not open some new channel of commerce, or some hidden source of wealth. Everything is growing and changing, ripening and increasing; and any collection of statistics, in regard to such a country, must fall far short of the reality, because our data must be taken from the records of the past, and we must lose the accumulations which are rapidly growing up around us.

The region in question is no less than the Great West, a wilderness fifty years ago, but now an important integral portion of a great nation. It contains eleven States and one Territory, and parts of two other States. The aggregate population, of all the States and Territories bordering on the navigation of the Ohio and Mississippi, is eight million four hundred and thirty-seven thousand seven hundred and seventy-nine; or, if we include only one third of the population of Pennsylvania and Virginia, for the portion residing west of the Allegheny Mountains, we have an aggregate of six million four hundred and sixty-one thousand eight hundred and ninety-two, which is a little over one third of the population of the United States. We approach the Congress of the

United States, then, with a claim in which, under the most narrow view of the subject, one third of the American people are obviously and directly interested, and in which a majority of the population of the Union are interested, if we include the whole of the inhabitants of the States which border on those rivers. But we hold this to be a very inadequate view of the question of interest; for such is the magnitude of our trade, and the intimacy of our relations with the Atlantic States, that there is scarcely a corner of the Union which is not bound to us, by a constant and reciprocal interchange of commercial advantages. Three of the Atlantic States have been engaged, for years, in rival exertions to secure the advantages of the Western trade, and have expended millions of treasure in the endeavor to attract that trade to their respective seaports. Another great State has recently embarked in the same patriotic contest, with a spirit which shows how high an estimate is placed upon the prize. Which of these States is not directly interested, in the transportation of merchandise throughout the whole length of our Western rivers? Which of them can view with indifference a question that involves the facility, the safety, and the cheapness of navigation, upon these great channels of commerce? After constructing, by the most lavish expenditure, railroads, turnpikes, and canals, leading to the West, does their pecuniary interest cease, and their patriotism die, at the termini of their gigantic works, and have they no further concern in the merchandise, or the passenger, which has passed their boundaries? These questions are easily answered. Those who purchase our products are interested in every tax upon our industry, and those who supply us with foreign merchandise or manufactured articles that we consume, are concerned in all

the facilities for transportation, by which their market is rendered accessible. Whatever affects the cost of freight and insurance, concerns all mutually, who participate in the interchange of commodities.

Of the millions of property floating annually upon the western waters, much is owned directly by citizens of the Atlantic States, and of the hundreds of thousands of passengers who crowd our steamboats, a vast number are inhabitants of those States, who are drawn hither by business, by curiosity, in the pursuit of pleasure, or in the search of a new home. The subject, then, is not one of local concern, or sectional character; and in asking Congress to expend a liberal portion of the public treasure, in removing the obstructions from our great Western highways, we believe that we represent the wants and interests not merely of eleven states and two territories, but of *the American people.* We invite the patronage of the nation, to a great central chain of National inter-communication, which pervades nearly the whole Union, having its connections with the Ocean, through Boston, New York, Philadelphia, Baltimore, and New Orleans, and extending its advantages westwardly, throughout the wilderness, to the extreme frontier.

Every tax upon the products of the country must be paid either by the producer or the consumer, or it must be divided between them, and whatever adds to the cost of our imports, it is so much taken in some shape from the pockets of the seller or buyer. Where these burthens are of such a character as to afford employment to a portion of our population, it is some consolation to know that what is taken from one class is given to another; but such is not the form of the tax upon our commerce which forms the subject of this memorial. We deplore the loss, the

utter annihilation of property. We deprecate the existence of obstructions in our navigation, which cause unnecessary expense by delay, by destruction of property, by risk, and consequent precaution. All that is thus taken is so much wrested from the hand of industry and enterprise, and given to the devouring element. It is lost to the country. Individuals suffer more or less, but no one is a gainer. The destructive hurricane purifies the atmosphere, and the carcasses that moulder on the battle-field enrich the soil, but the wealth engulphed in the bosom of the waters yields no fruit, nor does the corpse of the hapless voyager mouldering in an obscure grave, on the borders of a western river, add a flower to the wilderness.

The length of the rivers, which we propose to have improved at the national charge, is worthy of consideration. Without burthening this article with unnecessary details, upon a subject of general notoriety, we may state in round numbers, that the length of the Ohio from Pittsburgh to its mouth is one thousand miles, and that the length of the Mississippi from the Falls of St. Anthony to the Ocean is two thousand miles, giving an extent of three thousand miles for the principal rivers, the improvement of which we ask, by the general government. But in showing the national character of this navigation, and its importance in comparison with that of the Ocean, we add for the navigable length of the Missouri three thousand miles, and for the aggregate navigable extent of all the tributaries which pour their freights into these principal rivers six thousand miles more, making the whole extent of navigation twelve thousand miles. The policy which would consider a connected chain of navigation of twelve thousand miles in extent, and spread over an area

of four hundred and thirty-two thousand square miles, of unexampled fertility and boundless resources, as of local or sectional interest, must be narrow indeed. But if we are to consider the extent of this navigation, in competition with the line of the sea coast of the United States, for the purpose of vindicating our claim to a proportionate share of the protection of the Government, it will be necessary to double its length, as our navigation has a double coast, and we have twenty-four thousand miles of river shore, inhabited by American citizens, who are as much interested in the trade of these rivers, as any portion of the American public in that of the Atlantic.

Large as the interest would seem, which is indicated by these figures, it is even greater than we have stated. In order to form an adequate idea of the importance of these great rivers, as channels of commerce, we must embrace in our view the whole of the great system of intercommunication of which they are only connecting links. They are but parts of a great whole—important fractions of a magnificent system. Their most obvious and direct connection is with the great northern lakes, a vast chain of inland seas, surrounded by a productive country, and already whitened by the sails of a most valuable commerce. We cannot better illustrate the magnitude of this trade, than by quoting from a speech recently delivered in Congress by a member from Ohio.

"Mr. Giddings attributed this neglect of Western commerce to its silent and gradual growth. Until after the purchase of Louisiana it scarce had an existence, and the people on the seaboard had, even to this day, no adequate conception of its extent and importance. The American flag had first been raised on Lake Erie, within his personal recollection, on board of a small schooner of seventy

tons, in 1796. In 1802 the first Government vessel was launched there. Previous to 1815, the arrivals at Buffalo, now the queen city of the Western Lakes, were so few as not to be recorded—they were then three hundred and ninety-five—they now exceed four thousand. The first steamboat was built in 1818; there were now on Lake Erie alone sixty-four steamboats. After going to some extent in these statistical details, Mr. Giddings, to give Southern gentlemen a more adequate conception of what the Western commerce really was, went on to state that in 1842 the State of Ohio alone had built vessels of a larger aggregate amount of tonnage than Virginia, South Carolina, Georgia, Alabama, Florida, Louisiana, and Mississippi, with Missouri, Arkansas, and Tennessee in the bargain. Was a navigation like this entitled to no regard, no protection at the hands of Government? Including ships, brigs, and craft of all descriptions, there were four hundred vessels now navigating these lakes above the Falls of Niagara. The first steamboat built at Chicago was in 1832; and in eleven years the tonnage of that port had grown up to one hundred and seventeen thousand tons.

"On a lake coast exceeding five thousand miles, there had been bestowed by the government but $2,400,000, (while in the Delaware harbor alone it had spent $300,000.) Of this coast two hundred and forty miles belonged to the State of Ohio, and it had received but $423,000. Lake Erie had no natural harbor on all its southern coast, insomuch that Perry's fleet had to lie for protection under some little islands near the head of the lake. The mouths of the rivers were open in the spring, but as soon as the freshets subsided, the strength of the stream was no longer sufficient to force its way into the

lake; the consequence of which was, that by mid summer a bar of sand was deposited all across the mouth of the harbor, so that a man might walk across dry-shod. When a good harbor had been made by projecting parallel piers into the lake, as at Cleveland, vessels of six or seven hundred tons could enter at all times without the least difficulty.

"Mr. Giddings here went on to enumerate the harbors where improvements of this kind had been made or commenced, but all abandoned in 1838, in consequence of which all that had been done went to ruin, and some of the harbors were entirely closed. From 1825 to 1838, these improvements were made the care of the government, and appropriations were from time to time made and economically applied. The people were satisfied and grateful; but in 1838 the very tools necessary to preserve what had been done were publicly sold; the government expressly recommending that these works be abandoned. The people then learned what they had to expect."

The Buffalo Commercial Advertiser furnishes the very interesting statistics below; showing the amount of merchandise and furniture which passed that great key of the lakes, in the past year. Ohio, Indiana, and Illinois all receive goods through other routes. Michigan receives hers almost exclusively through Lake Erie.

The tolls show conclusively that the stream of emigration is to Wisconsin; but that Ohio is the great consumer of merchandise:

"The quantity of merchandise and furniture arriving here and passing westward is one of the best criterions of the growth and prosperity of the interior. In connection with our table of canal exports, we gave the aggregate of merchandise received. The ultimate destination of this

property and the families accompanying it, exhibits fully the leading points of emigration during the past season.

"Of the merchandise Ohio has received much the greatest quantity; while the heaviest aggregate of furniture has gone towards Wisconsin. The annexed table shows this:

Exhibit of Mdse. and Furniture passing Westward in 1843.

	MDSE., LBS.	FURNITURE, LBS.
Ohio,	29,056,865	1,384,372
Michigan,	16,505,281	1,492,627
Illinois,	6,954,903	1,275,377
Wisconsin,	5,730,523	2,630,190
Indiana,	4,511,301	249,936
Pennsylvania,	152,023	51,664

The exports of wheat and flour, from four ports upon the lakes, viz., Cleveland, Detroit, Sandusky and Chicago, in 1843, amounted to the following aggregate: Wheat one million eight hundred and ninety four thousand nine hundred and ninety-two bushels, and flour eight hundred and twelve thousand nine hundred and three, worth about *four and a half millions* of dollars.

The value of all the exports from Cleveland alone, for the year 1843, was *five and a half millions.*

The states immediately adjacent to these lakes, and directly interested in their navigation, are New York, Pennsylvania, Ohio, Illinois, Indiana, and Michigan, all of which have been enumerated as being directly interested in the navigation of the western rivers, except New York and Michigan. These two states contained together, in 1840, a population of two million six hundred and forty-one thousand one hundred and eighty-eight, which added to that of the states whose borders are washed by the Mississippi and its tributaries, give a total of eleven million seventy-eight thousand nine hundred and sixty-

seven, and shows the important fact that *eleven* out of the *seventeen* millions of the population of the United States are directly interested in these two great links of the vast interior chain of communication.

Nor is this the only form in which we recognise the intimate connection of these parts. If we take our position at the busy harbor of Buffalo, and behold her quays crowded with merchandise and passengers; if we extend our observation along the great railway and canal to Albany; and thence by the Hudson to New York. and the railway to Boston, we behold an inland thoroughfare of unrivaled extent and magnificence, created by a vast expenditure of treasure, and an unsurpassed exertion of genius, enterprise, and public spirit; and we see this long line of transit crowded with a busy throng of human beings, and rich freights of merchandise. To what end were millions of dollars expended in the construction of these highways, and why are they thus frequented by busy thousands of human beings? It is the road to the West; those countless tons of freight are the products of our rich plains, or the returns of foreign merchandise which are destined to traverse our lakes and rivers. It is a part of that great inland trade which has grown up within the memory of living men, and has become the pride of our country, its paramount interest, the muscle and sinew of its power.

If we select the important city of Pittsburgh, as our point of view, considerations of equal magnitude and results as widely interesting, are suggested to the mind. Claiming to be the "Birmingham of America," she is unquestionably entitled to that distinction in reference to manufactures of iron and glass, and in regard to other fabrics her position as a manufacturing city is among the

foremost. Her treasures of iron and coal, and her locality, must render these advantages permanant; and we are to consider this as one of the great fountain heads, from which the whole wide west must derive their supplies of manufactured articles, embracing a long list of the necessaries of life, such especially as bar iron, nails, fabrics of cast iron, and farming implements. Cincinnati is the rival workshop for these and various other articles, besides being the great emporium for agricultural products. Whatever facilitates the transportation of these articles is *protection*, the most substantial protection, to the manufacturer and the consumer. How important to Pennsylvania, as well as to the West, is the navigation from this, one of the chief depots of her mineral wealth!

But Pittsburgh is also the terminus of a canal connecting her with Philadelphia, and of the Great Central Railroad, connecting the same points, a magnificient work recently projected, and which it is hoped will be rapidly completed. That road will be three hundred and thirty-six miles in length, and will cost nearly $10,000,000. It will connect with lines extending to Lake Erie at Cleveland, and westward to Cincinnati and St. Louis.

If Cincinnati be the centre from which we view the ramification of these widely extended communications, we see two canals and a railroad extending to Lake Erie, a canal stretching into Indiana, a railroad projected to St. Louis, and a route to Charleston, S. C., through Nashville, by river and railroad, wanting but one short link to complete it — and again the indissoluble connection of vastly distant parts, and of interests apparently distinct, become obvious. We see how our rivers and lakes are linked together with a vast system of artificial improvements, constructed by the enterprise of individuals,

and the liberality of States; and we can but wonder, that when so many millions of money have been expended in so magnificent and so indispensable a work—in a work so beneficial to the people, and so honorable to the country, the General Government should be the only one of the parties interested that falters in the great duty of carrying it forward.

If, however, we consider the intricate connection between the navigation of these rivers and the Northern Lakes—if we take into view the canals, railroads, and turnpikes through Ohio, Indiana, and Illinois, by which they are united, and by means of which there are now several channels of direct communication between the cities of New York and Boston, and the Western States—we must add to the list of States directly interested in this navigation, the names of Michigan, New York, and Massachusetts, and swell the number of claimants upon the justice of Congress to more than half the population of the Union.

We cannot separate these interests. It is impossible to consider these great arterial channels, without perceiving their connection with each other, and tracing their ramification to the utmost extremities of our country. The West is no longer a frontier; it is the heart of the Union. This is not only geographically true, but it is true in every sense. The centre of population, of production, and of consumption, is here. We furnish the greater portion of the exports, and consume the greater portion of the imports, that make up the sum of the foreign commerce of the nation. Our rivers are no longer margined by silent forests; cities, towns, villages, and cultivated fields, enliven their shores, and bear testimony to the industry, resources, and refinement of the country.

We have said that the Ohio and Mississippi are but parts of a great chain of inland communication. Their tributaries penetrate every Western State, and disseminate throughout the whole of our broad plain, the advantages of this navigation, and should Congress carry forward, with the spirit worthy of a great nation, the work of improving the Mississippi and Ohio, it will not be long before every river in the West will be cleared of obstructions, by the action of the general or state governments—and the magnificent spectacle will be presented to the world of an uninterrupted inland navigation of *more than twenty thousand* miles in extent, within the bosom of a great continent, far removed from the sea coast, and independent of the estuaries and inlets of the ocean!

Nor is the conception of this great highway complete, until we trace it to its extremities. In the South it connects with the Gulf of Mexico in latitude twenty-nine, in the North it falls into the St. Lawrence, communicates with the whole southern boundary of the Canadas, and stretches off into the Atlantic ocean in latitude fifty; and it extends through Lake Superior, through a long chain of Lakes and Rivers, far beyond the utmost bounds of civilization in the North West. On the East it connects itself by canals and railroads, already mentioned, with the sea ports of the eastern and middle states, while on the West, its advantages are extended by the long channels of the Mississippi, the Missouri, the Arkansas and Red River, beyond the inhabited regions of the United States. From large portions of our country, it is the highway that must be traveled to Texas, to Oregon, and to Canada; it bears the freights intended for our commerce with Santa Fe, the products of the fur trade from the regions of the Rocky Mountains, and the traffic with all the Indian tribes upon

our borders. Such is the character and magnitude of the grand thoroughfare which we ask the nation to open and improve by its treasure, and such the trade for which we invoke the parental care of the government.

CHAPTER III.

Same subject continued—the navigation of the Western rivers considered in reference to its national importance.

In the preceding chapter we pointed out briefly, the extraordinary extent of the Western rivers, and their unrivaled capacity of usefulness to the public, as the natural avenues for the transit of passengers, and the transportation of produce and merchandise.

If the Western rivers are thus important to the American people, in reference to the facilities afforded to them in their commerce and private concerns, as individuals, it is not less so to them in their political capacity. Of the amount of population which we have set down as inhabiting the countries watered by these rivers, four millions fifty-three thousand seven hundred and thirty-one are inhabitants of the states containing the public domain, and in which the nation is directly interested as the owner of the soil. How many of those inhabitants would now be settled upon lands purchased of the government, had not the country been made accessible by the application of steam? The reply is obvious. Of all the elements of the prosperity of the West—of all the causes of its rapid increase in population, its growth in wealth, resources, and improvement, its immense commerce, and gigantic energies, the most efficient has been the navigation by steam.

Had it not been for the widely diffused facilities of com-

merce, afforded by the Mississippi and its numerous tributaries, ages would have rolled away before the great wilderness of the West would have been penetrated by the foot of industry; and had not the noble conception of Fulton, carried out by the skill of the American mechanic, and the energy of the Western people, brought the steamboat into successful operation, the productions of these rich plains must have continued to be floated laboriously to market by the insufficient means of the barge, the keel, and the flatboat, while our imports would have come to us burthened with a cost of freightage which would have limited the amount to an inconsiderable traffic; and the commerce of the nation, with its resources derived from imports, would have been proportionably depressed. The sales of public land would have been comparatively small, and the millions which have enriched the public treasury from this source would not have existed, as a branch of the national income. Without the navigation by steam, it is not probable that the proceeds from this source would have exceeded the cost of the purchase and sale of the public lands, with the contingent expenses of protecting, surveying, and bringing them into market.

The government is still the largest proprietor of the soil of the Western States, and is the party most largely concerned in interest, in every improvement which developes the resources, stimulates the industry, or enhances the value of land, in this region. Can it be doubted that an improvement in the navigation of our rivers, which would disarm it of its dangers, and decrease its expenses, would not produce those beneficent effects, or that the government would not be the greatest gainer from an expenditure which would increase her revenue from foreign

imports, enhance the value of the public domain, and enlarge the federal population?

The amount of the lands owned by the government, within the States and Territories, exceeds three hundred millions of acres, and that owned west of the Mississippi and Arkansas, exceeds seven hundred and fifty millions. One thousand millions of acres constitute the vast domain, penetrated and intersected by our great rivers, rendered accessible by our six hundred steamboats, and made valuable by the industry of our seven millions of inhabitants.

The value of the public lands sold, and paid for, in the eight years, from 1834 to 1841, inclusive, was $73,832,008 47, and deducting the sales in Michigan, Alabama, and Florida, which do not lie in contact with the waters proposed to be improved, the amount of sales, in the States directly interested, is $55,940,569 09. Nearly $56,000,000 then, have been drawn from these States within eight years, a portion of which has gone to the support of the General Government, and the remainder distributed *pro rata* among all the States of the Union. If the western people pay annually to the nation a revenue of $7,000,000, for the purchase of the lands they occupy, what proportion of that sum should be appropriated by the Government, in its capacity of *a land owner* only, for the keeping up the highways which render those lands accessible, and give them the greater part of their value? And what proportion should it appropriate as the proprietor of the countless millions of acres yet unsold, the value of which is daily enhanced, and indeed their entire marketable value almost wholly created, by the industry of the western people? If we should succeed in demonstrating the necessity of improving this navigation, or the expediency of the measure as a question of interest, can there be a doubt,

that the Government, as the largest proprietor of the soil, should bear her just proportion of the expense?

But the Nation has another important interest in this improvement. The report of the Postmaster General, dated December 2, 1841, showed that the mail was transported within the Western States, by railroad and by steamboat, five hundred and eighty-seven thousand three hundred and nine miles, of which the portion carried by railroads is not specified, but is too inconsiderable to be worthy of deduction. Large as this number of miles may seem, it is small compared with the extent to which the transportation of the mails by water might be carried, if our navigable rivers were so improved as to afford water for the passage of boats uninterruptedly during the dry season. The rapidity, safety, and cheapness of this mode of transportation, recommend it so strongly, as to leave little doubt of its adoption, wherever the navigation is such as to render it practicable; nor can there be a rational question, in our opinion, as to the duty of Congress, in reference to the improvement of those great arterial highways, through which the mails must flow, under any complete and thoroughly efficient administration of the post-office department.

Nor is this the only department of the government which is interested. A line of military posts extending along the whole western frontier, from the Southern to the Northern limits of the United States, derive all their supplies of ordnance, small arms, military stores and provisions, by means of these rivers, which also afford the facilities for the transportation of troops. In the eager competition among the numerous places in the West, whose citizens are applicants for the site of the proposed Western Armory, the relative accessibility of these points by the

larger navigable rivers, is dwelt upon as a prominent topic, showing distinctly the sense of the community on this subject. We have not the data at hand to show the amount of property, and the number of lives, annually embarked in this navigation, by our government, but there is no question that the stake is large, and the cost of transportation great; for although provisions, and some other articles, are delivered by the contractors, at their own risk, at the places of consumption, the cost and risk of transportation, forms part of the prices, and are actually paid by the Government.

In case of a war by which our coasts or borders should be assailed in any direction, the importance of this navigation to the public would be vastly increased. If the coasting trade should be rendered unsafe, a large amount of the commerce between the States, which now floats upon the Atlantic, would necessarily be thrown upon the interior channels of communication, and would pass along our great rivers, which would become, if such is not now their character, the great central highways of the Nation.

As the rivers in question occupy a central position in reference to the whole Union, and are now connected with all its extremities, either by their own tributaries, or the noble works constructed by the States, they would become the principal ways by which troops and munitions of war would be transported to the points of danger; and not only the safety of the navigation, but the completeness and celerity of the access from point to point, would become eminently important to the Nation.

During the last war, New Orleans was defended in part by gallant volunteers from the interior, and that city would have fallen but for the timely arrival of arms from Pittsburgh. And in any future war, the Western plain

must be the centre and main body, upon which the Nation must rely for support, and from which men and arms, and provisions, must be drawn, to sustain either extremity of the Union which may be threatened from abroad.

But even now, the Mississippi is the great arterial highway for the transit of passengers between the extreme points of the Union. At this time the actual cost of a passage from Philadelphia to New Orleans, upon the mail route, by the railways and roads along the Atlantic sea board, is, for a single passenger $94, while the expenses of a single passenger, between the same places, by the route of the western rivers, is but $36. If the great western route, impeded as it now is by obstructions in the navigation, burthened with tolls, and taxed by exorbitant rates of insurance, is the cheapest channel of intercourse between the north and south, by more than one half, can it be doubted that it will become the chief thoroughfare when it shall have received the improvements of which it is susceptible? Setting aside, then, the safety and advantage of the greater portion of the American people, which we think the government ought not to disregard, these rivers claim the attention of the National Legislature, as affording the most important link in the chain of post routes, and the most useful military highway within the bounds of the Union.

The importance of this navigation, and of its improvement, has not been overlooked by the States which are most immediately interested. On the 27th January, 1817, a resolution was passed by the legislature of Ohio, inviting the co-operation of Virginia, Pennsylvania, Kentucky and Indiana, in measures for the improvement of the Ohio river. The invitation was promptly responded to by Virginia, Pennsylvania, and Kentucky; and in 1819 a

thorough examination of that river was made by Gen. Blackburn of Virginia, Gen. John Adair of Kentucky, Gen. E. W. Tupper of Ohio and Walter Lowrie, Esq., of Pennsylvania, who made a joint report to their respective legislatures, under date of November 2, 1819, accompanied by elaborate drafts and plats. It is believed that the several Western States have caused surveys to be made of many of the rivers within their boundaries; Ohio has improved the Muskingum, and Kentucky is now engaged in making slack water navigation upon Green river, Kentucky river, and Licking; Indiana and Illinois contemplate the improvement of the Wabash, and have caused surveys to be made for that purpose, and the atten tion of the General Government has been urgently called to the Upper and Lower Rapids of the Mississippi.

If it be asked, why the improvement of the Ohio and Mississippi has not been undertaking by the States whose borders are washed by these streams, it might be inquired, in return, why a few States, of which these rivers form the boundaries, should assume a work of such magnitude, and of so obviously a national character. As well might the States on the sea board, be required to erect light houses, and to improve the harbors of the seacoast, as the Western States be left to open the navigation of those great rivers, which separate States, that are declared by the supreme law of the Union to be public highways for all the States, and upon which no single State, nor combination of States, can place an obstruction, or collect a toll. Being public highways for all the States, and not lying within the territory or civil jurisdiction of any one member of the confederacy, the navigation belongs to the whole American people, and is a proper subject of National legislation.

There is another argument, which is entitled to no small consideration. By the Ordinance of 1787, enacted by Congress, for the government of the Territory of the United States, north-west of the river Ohio, it is declared that, "the navigable waters leading into the Mississippi and St. Lawrence, and the carrying places between the same, shall be common highways, and forever free, as well to the inhabitants of the said territories, as to the citizens of the United States, and those of other States that may be admitted into the confederacy, without any tax, import, or duty therefor." This Ordinance is in the nature of a compact, between the General Government and the people of the new States, and it reserves certain rights in which all the citizens of the United States are interested. It is a part of the fundamental law of the land. Reserving the rivers, of which we are treating, as common highways, *for all*, it divests all the States, and each particular State, of any jurisdiction over them. Not only can no State obstruct the navigation thus declared to be free; but neither can any State enter upon those rivers for the purpose of changing, even for the better, its navigable channels, any more than an individual could for a similar purpose alter the construction of a public road or bridge, or than one individual could enter upon the property of another to exercise over it any act of ownership. A declaration of a right consecrated and reserved to the use of the whole public, as distinctly negatives any ownership or jurisdiction on the part of any part or party, less than the whole, as the investment of property in an individual divests the titles of all others. We need scarcely insist on so plain a point.

But if the United States, for the use of her own citizens, reserves a highway, does she not reserve to herself

the obligation to keep it open, and to expend upon it whatever labor and money may be requisite to place it, and keep it, in a condition to be used? Would any government reserve a right, and not reserve the power to enjoy it? Does it not follow as a necessary consequence, that having guarantied to the people the navigation of these rivers forever, the United States is bound to keep them in a condition to be freely navigated?

The phraseology employed on this occasion is very precise, and would seem to show that Congress had considered carefully the force of the terms they used. The Western rivers are *common highways;* they are to be *forever free*, not only to the inhabitants of the Western territories, but to the citizens *of all the States:* they are to be highways not merely for local use, or for sectional purposes, but for the intercourse and commerce of the nation. They are to be national highways—avenues for the trade and travel of the whole people. In short, they are to be channels for that commerce "among the States" which Congress has the right to regulate, and which they did undertake to regulate, in this instance, by providing that the roads for it should be free forever from all hindrance.

But there are obvious difficulties in the way of any joint or several action by the States, in relation to this work. If undertaken by the States singly, it would be difficult to assign the limits within which the labor of each should be expended; if by all jointly, the diversity of population, wealth and interest, would embarrass and probably defeat any attempt to apportion the expenditure. Popular opinion would vary as to the time, the manner, and the magnitude of the disbursement—and while all the States would be equally able or willing—or that the

unanimous action of their legislative bodies could be obtained.

The financial resources of the Western States are limited, and have already been taxed to the full extent of their ability. Populating with unexampled rapidity, and spread over a vast surface, their unavoidable expenses have been great, and their exigencies suddenly created. In older communities public improvements have grown up imperceptibly with the increase of population, wealth, and refinement; but here, an energetic and civilized population, accumulating rapidly in a wilderness, were obliged to create the institutions, the public works, the facilities for intercourse and civil government, to which they had been accustomed. Within fifty years we have created and reared up civil institutions and monuments of public spirit and social enterprise, which in other countries have been the work of centuries. We have organised cities, counties and states; we have made roads, canals, and railways; we have built court houses, jails, schools, and churches; we have covered a wilderness with productive farms, and flourishing villages. All this has been done by a people, who brought little wealth into the country, from the products of a virgin soil, and the labors of an enterprising population. The State of Ohio and its citizens have nearly completed seven hundred and sixty-five miles of canal, and artificial slack water navigation, at a cost, when all the payments shall have been made, of $9,500,000, and six hundred and sixty-seven miles of turnpike road, at a cost of $4,000,000, besides about seventy miles of railroad. The expenditures of Kentucky, upon turnpike roads and slack water navigation, have been very large; while Indiana and Illinois have expended millions of dollars in attempts and preparations to

extend great systems of artificial communication throughout their widely spread territories.

It is essential to a successful prosecution of this great work, that it shall be carried on, not only with the treasure of the Nation, but under the direct supervision of government officers. The magnitude of the undertaking, and the wide extent of territory through which it must be conducted, requires that there should be unity in the plan, skill in the execution, and rigid economy in the expenditures, to give it the full efficiency of which it is susceptible. The government has the command, in its able corps of engineers, of all the talent, experience, and scientific knowledge requisite for the work, together with the possession of able reports and estimates, already made, in relation, it is believed, to every branch of the desired improvements; and in the known fidelity and efficiency of these officers the public would have a pledge that the expenditure swould be made under a well matured system, and with reference to public utility, instead of being prostituted to sectional partialities, or private speculations.

We are gratified to perceive that our views in regard to the agency by which this great work shall be effected are in accordance with those of the general government, and that an experienced officer, who has the confidence of the country, has been entrusted with the execution of the preliminary surveys. We hail this measure as an earnest that something is to be done, and that it will be done under right auspices. We ask nothing but what is practicable, and reasonable—nothing but what will be honorable to the country and permanently useful to the people; and as we desire that every dollar which may be appropriated to a purpose so truly national and so nobly munificent shall be faithfully applied, we hope to see this work

entrusted only to the most responsible hands, and conducted with the most rigid economy. And we feel relieved in regard to the duty of furnishing the statistics requisite to sustain our petition, by the knowledge that several engineers of great ability have been employed industriously in making surveys; and by the belief, that their reports will furnish all the information desirable, and in a far more perfect form than we could give to it.

CHAPTER IV.

Snags—how caused—losses occasioned by them—periodical floods, —the flood of 1847.

The Ohio river, though not obnoxious to the full force of the sarcasm of the distinguished Virginian who described it as frozen one half of the year, and dried up during the remainder, is subject to vicissitudes which seriously affect the navigation, and demand the national attention, from the double consideration of the magnitude of the evil, and the vastness of the means required for its correction. If the work can be done at all, in a manner worthy of the energies of a great people, and permanently advantageous, it must be done by the national government.

Throughout the winter the frequent changes from cold to moderate weather produce rains and thaws, which occasion a series of freshets, and afford ample supplies of water. The change, from the severe cold of the winter to the higher temperature of the spring, is usually sudden, and causes the precipitation of vast floods into the channels of our rivers. The snows which cover the Allegheny Mountains, along their whole western exposure, from the borders of New York, to those of North Carolina, are rapidly melted, and the whole of this mass of water thrown suddenly into the Ohio, which now attains its greatest depth and volume. In the great rise of 1832, the water rose at Cincinnati sixty-three feet above low

water mark; the sectional area was ninety-one thousand four hundred and sixty-four feet, without including its extension over the lower parts of Cincinnati and Covington; the number of cubic feet discharged per hour was two billion nine hundred and ninety-eight million five hundred and twenty-nine thousand seven hundred and fourteen, and the velocity of the stream was six and a half miles per hour.

In the first series of this work we gave a particular account of that flood, and expressed the opinion that the circumstances which must necessarily concur to produce so extraordinary a freshet, were so numerous, and would so rarely be likely to occur together, that floods such as that of 1832, could only take place at far distant periods. The great flood of 1847, which has occurred since the publication of that volume, has not presented any facts which materially effect our position, otherwise than to sustain it. The meteorological phenomena were different, but were such as indicated similar results. In 1832, heavy rains succeeded deep snows and intensely cold weather, and the earth being frozen hard, the mass of water, supplied by the rain and melted snow, was suddenly precipitated into the water courses. In 1847, the weather had been variable, with frequent rains, so that the earth was saturated with water, and the streams already swollen, when "the windows of heaven were opened," and vast floods of rain were precipitated upon the whole country. These rains extended to the mountains, where there was much snow, the whole of which was added to the liquid mass, now moving over the whole surface contiguous to the Ohio and its tributaries, towards that great channel of drainage. The rise at Cincinnati commenced on the 9th of December, the river being then tolerably high, or in what is

called a good navigable stage; and on the 10th it rose fourteen feet in twenty-four hours. During the next two days it rose at the rate of about five feet in twenty-four hours. On the 17th it had reached its maximum height, and the rise was then sixty-two feet six inches above low water mark, or within six inches of the high water mark of 1832.

At Louisville the rise was about the same, in comparison with that of 1832, as at Cincinnati, while at Marietta, it was several feet less, verifying our remark, that, as a general rule, the maximum height of the flood would be attained at a point central between the head and the mouth of the river, and that this point would be found at or near Cincinnati.

The appearance of the river, from the hills overlooking Cincinnati, was very grand. The low grounds, on both sides, were covered, and a broad expanse of water was presented to the eye. All the lower parts of the city were submerged—the ground floors of the warehouses on Water and Front streets were flooded, the water extending up the streets running north, to Columbia or Second street, and filling all the cellars on that street. The bottom lands on Mill creek, including a large sweep of the south-western part of the city, not yet closely built upon, but covered with scattered buildings, were all inundated; the serpentine channel of Mill creek was entirely lost in the view, and in its stead was a wide expanse of water, covering the whole plain to the bases of the hill on either side, and forming an estuary which extended more than a mile north and west from the river. On the other side of the city, the little valley of Deer creek was also inundated, leaving the high grounds, which form the greater part of the site of our city, standing out in the

form of a promontory, inclosed on three sides by the vast flood. The suburb of Fulton and the towns of Newport and Covington were partly submerged, and on both sides of the river small boats were seen, plying actively from house to house, or passing to and fro over the flooded streets and alleys. A larger number of steamboats than usually frequent our wharves, now lay moored in contact with the warehouses, their voyages being suspended by the common calamity which involved alike all the towns on the river, and by the impossibility of procuring fuel at the wood yards. The streets were crowded with pedestrians and carriages, for while there was less business, there were more idle persons than usual; many were engaged in moving their effects; the houseless were seeking shelter, and the benevolent seeking out the houseless; curiosity and want of employment swelled the throng. The river, spread out to a greatly increased width, and filling its valley to the bases of the hills, swept its mighty current majestically along, its waters discolored with mud, and its broad surface loaded with drift-wood, rails, fragments of wooden houses, and various other of the spoils and evidences of its destructive career. And as if to deepen the shades, and give a bolder tone to the features of this scene of mingled grandeur and desolation, the weather was variable and stormy, the clouds cold and forbidding, and the ground covered with snow, impressing the beholder with a sense of the reality of the scene, and of the vastness of its extent and consequences.

It will be seen that the flood affected chiefly the part of Cincinnati on the river, where the buildings were mostly stores and places of business, and the suburbs composed of dwelling houses. Hundreds of families were driven suddenly from their habitations. The weather was

intensely cold, and the houseless exiles, from the comforts and protection of home, were mostly poor or laboring persons, who could not well afford the loss of time, the destruction of furniture, and the expenses incident to this unexpected catastrophe. Thousands of individuals were thus thrown suddenly upon the charity of their fellow-citizens, and, we are happy to say, that the most considerate and generous alacrity was evinced in responding to the call. The churches were all thrown open, as places of temporary residence, to shelter the houseless, committees were appointed to administer to their wants, and money liberally contributed for their present support. The clergy of all denominations were active ministers in the work of benevolence.

The destruction of property, and the losses, either direct or contingent upon the flood, were very considerable. Many of the most important roads leading into the city were overflowed or obstructed, and the river navigation suspended. All business was suspended for about a week, and many branches were interrupted for a longer period. For about ten days the markets were scantily supplied, and the prices of poultry, butter, vegetables, &c., somewhat enhanced, but the substantial articles of food are, of course, too abundant here to be effected by any temporary cause. Large quantities of fire-wood were floated off from the wharves. Very little merchandise was destroyed in the inundated stores and warehouses, as such property was generally removed in time. The losses consisted mainly in injuries to buildings, destruction and loss of furniture in houses of the poorer class, injuries to fences, gardens and bridges, and loss to manufacturers and mechanics whose shops and yards were overflowed. The aggregate of these injuries, added to the vast loss of time,

was great, yet the amount was small compared with the number of persons interested, and the mass of property at risk—so small, that the waters had scarcely subsided before the traces of the flood ceased to be distinctly visible, or its existence to be recollected as a great public calamity.

The loss of property along the shores of the Ohio, and of all its larger tributaries, was very great. Vast quantities of fire-wood, prepared for sale, at Louisville, Cincinnati, and other towns, or accumulated at the wood-yards and steamboat landings, for the use of steamboats, were floated away. The farmers suffered largely in the destruction of their fences, and of corn, hay and provender stacked or cribbed in the bottom lands. Much of the Indian corn of this country is allowed to remain on the stalk through the early part of the winter, to be gathered at the leisure of the farmer, in the season when he has least to do; while another large portion is pulled from the stalk, and thrown into pens or fodder houses in the field, to be husked and permanently housed at the same convenient season. To this careless husbandry much of the loss of this flood is attributable, as all the corn remaining in this condition, in the bottom lands, would be exposed to destruction.

Since 1832 great changes have taken place on the shores of the Ohio. Commerce has prospered, and its operations become greatly enlarged. The demand for our products has been increased, and every branch of labor and trade has been stimulated into greater activity and magnitude. The towns and villages on the river banks have consequently grown in size and improved in appearance, and their increased business and necessary connection with the river have occasioned the erection of valuable buildings on the immediate margin of the water,

and within the reach of the highest floods. Besides the towns, of which portions are thus exposed to inundation, there are other places, such as Lawrenceburg, situated wholly upon overflowed ground, and which were entirely overwhelmed and surrounded by this great flood.

One of the important consequences of these great floods is, the creation of obstructions in the form of logs and trees, which are swept from the bank and precipitated into the stream. The snags, which cause the destruction of so many boats, are formed of large trees which are thrown into the channel, by the crumbling of the banks, or the force of the current. The base of the stem, and the mass of roots, rendered heavier by the earth which adheres to it, sinks to the bottom; the top of the tree floats, and is thrown in the direction of the current; the roots become imbedded and firmly fixed; the smaller branches decay and drop off, and the large limbs remain, pointing down the stream. When these sunken trees are concealed beneath the surface, they are very dangerous to boats, which, rushing upon them with the momentum given by a powerful steam engine, seldom fail, when they strike, to have the hull perforated, and the boat sunk.

This branch of the subject has already received the attention of the government, and the results of the experiments instituted have been entirely satisfactory. The snagboat, constructed under the direction of the government, has been successful in removing these obstacles, at a very trifling expense, and with great facility. The boat is of simple construction, yet has such power, that the largest tree, however firmly fixed, is removed in a few minutes. A number of these ingenious vessels were employed for several years, with such success, that thousands of snags were removed from the Ohio and Missis-

sippi, the most dangerous places were rendered perfectly safe, and the whole navigation made completely free from this formidable evil. In the year ending in September, 1833, nineteen hundred and sixty snags were taken up from the Mississippi, and the chances of danger diminished by at least that number. The crews of the boats were employed within the same year, when the water was too high to permit their working on the bed of the river, in felling the overhanging trees, which stood on banks liable to be undermined; and removing ten thousand trees, which must soon have been precipitated into the current.

From 1822 to 1827, the loss of property on the Ohio and Mississippi, by snags alone, including steam and flat boats, and their cargoes, amounted to $1,362,500. The losses on the same items, from 1827 to 1832, were reduced to $381,000, in consequence of the beneficial action of the snagboats; and those losses were still further reduced in the years immediately succeeding, by the diligent prosecution of the same service.

We are not aware of the causes which have induced the discontinuance of this valuable service, but we know that the consequences have been most disastrous. For several years past, the appropriations for the snagboats have been so small as to render that service wholly inefficient, and the snags have accumulated with fearful rapidity in all the western rivers, while the increasing amount of commerce, and number of boats, have swelled the danger and the losses to an appalling extent. In the memorial of the citizens of St. Louis, recently published, it is stated that "in the year 1839 there were forty steamboats lost; forty-one in 1840; twenty-nine in 1841; and in the year 1842, the number is said to be twenty-eight—making a total in four years of one hundred and thirty-

eight boats." The estimate here given for the latter year is far short of the truth, for since the date of this memorial, at least fifteen steamboats have been lost; indeed, while preparing this memorial, a single mail from the southwest brought intelligence of the loss of five boats, four more were added to the melancholy list on the following day, and three more by a subsequent arrival.

Between the 11th of September and the 15th of October, in the year 1842, the losses on the Mississippi, between St. Louis and the mouth of the Ohio, a distance of only one hundred and eighty miles, were $234,000. Within the succeeding seventeen months, there were lost seventy-two steamboats, worth $1,200,000, besides their cargoes, which were of great value.

The losses paid by the insurance offices in Cincinnati alone, on boats and cargoes, during a period of five years, from November 1837, to November 1842, including only the losses by obstructions in the navigation, and excluding all losses by explosion, collision, fire, and other causes, were $442,930 89. As insurance is made also at Pittsburgh, Louisville, Nashville, St. Louis, Wheeling, Natchez, New Orleans, and at some of the smaller towns, the above sum might be multipled by seven to arrive at something like a fair approximation of the losses sustained by underwriters, from the dangerous condition of the navigation, and the result would be $3,000,000, or $600,000 per annum. If to this be added the losses from the same cause, on which there was no insurance, the amount would be not less than $1,000,000 per annum. $1,000,000 per annum is actually taxed on the commerce of the West, for losses sustained in consequence of obstructions, which might be wholly removed by an appropriation by Congress of a comparatively trifling sum!

An additional fact showing the danger of this navigation, is, that many offices have declined to insure the hulls of boats, and such risks are only taken on the best boats, and at rates varying from twelve to eighteen per cent.; the insurers are said to lose money at even these enormous rates. The amount, then, of the annual risk, on the $7,200,000 invested in steamboats alone is more than $1,000,000.

The most fruitful causes of these losses are the snags; a species of obstruction which we have shown to be completely within the control of the government; and we therefore respectfully urge the propriety of an immediate and energetic action by the government, in reference to this subject, by the construction of as many snagboats as may be necessary, and an annual appropriation, for keeping these boats in the regular service of the nation, from year to year.

We have thus far not touched upon the exposure of life, occasioned by the inattention of government to this dangerous navigation. There are employed, on the six hundred steamboats, and the four thousand flat and keel boats, that float on the Ohio and Mississippi, not less than from forty-five to fifty thousand persons; and as all the steamboats carry passengers, there are several hundred thousand, not Western citizens only, but citizens of each and every State in the Union, annually exposed to delay, expense, inconvenience, and jeopardy of life, from the causes indicated in this memorial. And who shall count the value of their lives? Shall the lives of the free citizens of an enlightened nation be weighed against the amount of an appropriation in money which would insure their safety? The Romans paid the highest civic honors to him who saved the life of a citizen; and if we admire the principle which dictated this policy, what should be

the conduct of a christian and highly civilized nation—a nation of unbounded resources and untiring energy, in reference to a work of comparative insignificance, but the neglect of which involves daily and hourly the lives of many citizens? The American people have reserved in their constitution the right of passing from State to State, and of transporting their property throughout the Union; and can it be doubted that the government should facilitate the exercise of a right asserted with such provident care? To an enterprising, commercial, and highly social people, who travel so continually and so extensively, no subject can be more important than that under consideration.

It is hardly necessary here to enter into a minute description of a steamboat disaster on the Mississippi. The peculiar character of that mighty river, the irresistible force of the current, and the steep and crumbling nature of the banks, which afford but few safe places of landing, surround the disabling of a boat on these waters with fearful dangers. When a steamboat, heavily laden, and crowded with passengers, strikes upon a snag in the night, and is engulphed in a few minutes in the stream, the scene is terrific beyond description; the loss of life to some of the more helpless of those embarked is inevitable, and the danger to all appalling.

It is not to be disguised that many losses occur from the insufficiency of steamboats and their machinery, and from the culpable rashness, negligence, and ignorance of those who have them in charge. This is a subject which has excited much public attention, and has even occupied a prominent place in the discussions of the National Legislature. The result of the most careful inquiries has produced a general conviction on the minds of those conversant

with the subject, that while we have many fine boats, managed with as much skill and prudence as those of any other country, and in which the passenger enjoys the highest degree of safety of which such navigation is susceptible, there is connected with the remainder an inexcusable want of care of the lives entrusted to them. The unavoidable accidents to steamboats are few, in comparison with losses occasioned by neglect and bad management, and by obstructions in the navigation.

To discriminate among these causes of loss, and apply the remedy, is a matter of no small delicacy and embarrassment, but it is one which would be stripped of much of its difficulty if the natural obstacles which endanger the navigation were removed. At present, the great number of steamboat losses blunts the public sensibility in regard to such catastrophes, and wearies and baffles that spirit of inquiry which would investigate the causes of these disasters; while it affords a ready excuse for those who might otherwise become the objects of public condemnation. If the river channels were disarmed of their terrors, and the safety of boats was made to depend entirely upon the fidelity and skill of their construction and management, the public would demand a much greater degree of security than is now expected, and the owners and officers of boats would be held to a higher degree of responsibility. A wholesome moral effect would also be produced by the action of the government. So long as the government, regardless of its parental and conservative character, remains a cold and indifferent spectator of the destruction of life and property, so long will life and property cease to be regarded with care by the thoughtless portion of its citizens. In a country where public opinion is the sovereign law, and where so much of that public

opinion flows from the legislation created by itself; a tender sensibility for the life of the citizen, and a decorous respect for his property, is peculiarly demanded from those who, in making the laws, influence the morals and sentiments of the people.

CHAPTER V.

Sandbars——plans for improving them——by wing dams——by slackwater—by dredging machines.

The bars in the Ohio may be classed—first, into those formed of hard and apparently permanent gravel; 2nd, shifting or loose gravel; and 3d, shifting sandbars. These bars have been minutely surveyed, on several occasions, by officers of the United States, whose reports furnish all the information which may be desirable in regard to them, and preclude the necessity of any detailed description. It may be remarked, however, that while they present serious obstacles to navigation in low water, they seem also to serve a valuable purpose in another respect. The Ohio, through its whole course, has in general a gentle and equable current. In low water, the river is resolved into a series of ripples or dams, with extensive basins of slackwater between them, varying in depth from two to five fathoms. It would seem as if nature had formed these bars or dams, for the purpose of collecting the water above them, and thus forming a succession of navigable pools. Following this indication, it would seem desirable, not to remove them, which is perhaps impracticable, but to pass them by some form of artificial channel, which would not greatly change the depth of the water above. Experiments, having this object in view, have already been made under the patronage of the government, by

constructing wing dams from each side of the river, so as to confine the current within narrow banks, and to give it a sufficient volume of water to wash a current for itself. A work of this character was constructed about eighteen years ago, by Col. Long, of the topographical engineers, at Henderson bar, two hundred miles below Louisville; and similar dams have since been constructed, at French island, Three Mile island, Scuffletown bar, and the Three Sisters. These were among the shoalest and most difficult places in the Ohio, and some of them have been greatly improved.

We have, heretofore, entertained sanguine hopes of the success of this mode of improvement; but our expectations, as to its efficiency, have been greatly modified by the experiments that have been made. In some instances the bars have been improved; in a majority of cases the navigation has not gained any advantage, and in a few it has been injured. This disparity of result was, perhaps, unavoidable, in an experiment so novel, and where it was attempted to control nature, in one of the most gigantic of her operations. It is not reasonable to expect that success should attend the first steps of such a movement. This mode of improvement will probably be found successful to some extent, when prosecuted upon a scale consistent with the liberality of a great nation, and reduced to system by a careful attention to the results of experiment and observation. We are sorry to say, that we believe it to be not of universal application, and that it cannot be depended upon as a form of improvement independent of other aids.

As a general rule, we are inclined to believe, that but little can be done, or ought to be done, to change the condition of the bars; and that their entire removal, if it

could be effected, would be objectionable, if not ruinous. Forming our river, as they do, into a series of pools, which afford a natural slackwater navigation, their agency could not be dispensed with, without destroying this admirable arrangement of nature. In most instances, where dams have been constructed for the purpose of changing the current of the river, or opening new channels for the water, they will be found to have failed of their purpose. Their proper office is simply auxiliary to the agencies which are already and naturally in operation, and they should be employed only to deepen and render permanent the existing channels. Thus, where the river breaks over a bar by several channels, it might be right to obstruct all of them but one, selecting for that purpose the most direct, or that which conformed itself most nearly to the general current of the river; and in cases where the river spreads out to a width greater than ordinary, the channel might be advantageously narrowed.

In regard to most of the bars, we incline to believe that but little else can be done than to open the present channels, by removing the logs, stones, or other accidental obstructions, so as to give to boats the advantage of the whole depth of water which the soundings would indicate. This is in itself an important work, and a systematic attention to it on the part of the government would be very beneficial.

It may also be suggested, that many of these bars, supposed to be the most difficult to affect by permanent artificial improvement, are composed of shifting sand, through which channels are easily cut, which would remain open during the season of low water, but would be filled up with the same species of loose sand, during the floods of the winter. It may be worthy of experiment, whether at

such places channels might not be opened annually, and kept open during the season, at an expense, trifling when compared with the value of the service. Small vessels, propelled by steam, and supplied with machinery for scooping out the sand, would open channels sufficiently deep for the smaller class of steamboats, with great facility, and they might run from bar to bar, throughout the season of low water, without incurring any formidable expenditure.

We have no doubt that this plan will be ultimately adopted, and that the business of the river will be conformed to it.

Much of the inconvenience of low water has already been overcome by the ingenuity of our mechanics, and the enterprise of our merchants, in the construction of steamboats of light draught, that ply industriously through nearly all the season of low water. But individual exertion cannot do every thing. We have put our own shoulders to the wheel with manful resolution, and we hope the government will perform its part with equal alacrity.

Among the projects for improving the navigation of the Ohio, that of converting the stream into slackwater by the construction of locks and dams has lately been spoken of, and has many advocates. It is plausibly argued that the plan, which has proved successful on the Monongahela and Kentucky rivers, must be equally applicable to any stream of similar character, and that the superior magnitude of the Ohio does not materially affect the question, as the principle would be the same. We dissent wholly from this proposition; and are glad to be able to say, that our opinion is confirmed by that of Col. Long, one of the oldest and ablest engineers in the service of the United States, to whom we are indebted for some of the following

suggestions, and whose familiar acquaintance with this river, adds greatly to the weight of his authority.

Slackwater, or lock and dam navigation in the Ohio, would be objectionable on the following accounts:

1. We have already pointed out the admirable economy of nature by which the waters of this beautiful river are arranged into a series of pools, having a gentle current, and an abundance of depth. Having but few snags or other obstructions, and impeded only by the bars in very low water, the Ohio is one of the best navigable streams in the world, for eight or nine months in every year. The obstruction from low water does not occupy more than three months in the year, nor is the navigation wholly suspended during all that period, being for the most part supplied, as we have stated, by boats of light draught. We object, then, to any project, and especially to one of which the success is problematical, which, for the purpose of improving the navigation during three months, might injure it through the remaining larger portion of the season. It is obvious that the natural navigation, so long as it can be used with ordinary facility and safety, is better than any artificial navigation whatever.

2. The pools between the dams must sooner or later be filled with deposits of sand and mud, from the turbid water always brought down in times of freshet.

The quantity of mud contained in the water of the Ohio, when swelled by freshets, according to the experiments of Capt. Crane, is nearly two per cent. of the fluid volume of the river; and consists "not only of soft matter, but small stones, known to come even from the tributaries of the upper Ohio, attached to floating ice, roots of trees, &c." This matter is found as far down as the rapids at Louisville, over which they are carried by the

force of the current, separated by the rapidity of the motion, and deposited below. We take the following remarks from his report:

"A given volume of muddy water is to the volume of the mud contained in it as 1 is to 0.01923. By separating the same volume of muddy water, into clear water and mud, the resulting volume of clear water is to the resulting volume of mud as 1 is to 0.01961. The specific gravity of the muddy water, as it runs in times of high water, is 1.2745—that of the clear water obtained by the separation being being 1.0000, and the specific gravity of the earthy matter after separation is 1.5480.

"Hence in every 100 cubic feet of water passing the falls in times of high stages, there also passes, at the same time, suspended in that 100 cubic feet, very nearly 2 cubic feet of mud.

"The area or cross section of the stream, taken on the crest of the rock, at the head of the falls, is then 96,128 square feet, and the velocity of the stream may be proximately estimated at four miles the hour.

"From these data, it is calculated that there passes over the falls, during every twenty-four hours, in the high stages of the river, 936,998,454 cubic feet of mud. This uniformly spread over a section of land, (one square mile,) would cover it to the depth of 33.6 feet!

"We need not, therefore, be surprised at the fact of ten feet depth of mud being found deposited in the locks of the existing canal, during a single rise of the river. Sometimes the accumulation is so great, that serious detention occurs to boats passing through during the time when all the force that can be raised are dredging the mud to open the gates."

"In times of high water, vast quantities of drift wood

pass the falls. The channel which it takes in passing depends chiefly upon the direction of the wind. This drift wood is a very great inconvenience to the existing canal, and would be found one of the strongest difficulties to contend with, in keeping any work free from being choked at every rise of the river."

Water in a state of rest deposits its impurities much more rapidly than when in motion, and all observers of the Ohio have noticed how the bars form and accumulate, in the eddies and pools where the current ceases to flow. Where a floating log or tree gets aground, the sand lodges below it, forming a bar, which often becomes an island. The erection of dams would render those pools stagnant, through which the water now flows with a gentle current, yet with sufficient velocity to keep the channel open, and to bear onward the floating mass of earthy matter; and the deposits, immense as they are shown to be by actual experiment, would soon fill the pools, to the great injury, if not entire destruction of the low water navigation.

The operation of this principle is distinctly seen in the formation of the flat lands and shallow waters, at the outlets of the Mississippi into the Gulf, where the earthy particles that are suspended in the fluid, by the swift current of the confined river are deposited as soon as the turbid stream pours itself into the ocean and becomes comparatively at rest.

It is no answer to this objection, to point to the successful operation of the slackwater principle upon other rivers, unless they can be shown to be similar to the Ohio in character and magnitude. On the Kentucky and the Monongahela the slackwater has not been in operation long enough to establish facts from which to infer that its

success will be permanent. Nor do these rivers assimilate to the Ohio in character. Originating in the mountains, passing over channels of rock through a great part of their course, and not dependent upon other rivers for supplies of navigable water, their filtering pools must be longer in filling up with sediment—because there is less sediment, and more rapid currents to carry it off. The Ohio is the main sewer into which all the masses of alluvian are poured from her numerous tributaries, and by which these vast volumes are passed off toward the ocean. Here of course the accumulation of such matter will be the greatest, and the effects of its detention the most rapid and disastrous.

3. The currents through the pools would be so much retarded, that rafts, flatboats, &c., floating with the stream, and having no other motive power, would be seriously delayed in their progress to market. A great portion of the lumber used at all the towns on the river, as well for building, as in the manufacture of furniture, carriage and wagon making, and in a great variety of fabrics of wood, is floated upon the Ohio in rafts; all the scantling, boards, and shingles, of pine and cedar, are brought in that way. It is obvious that, in so new and so growing a country, the quantity of timber required for building must be immense, and that so heavy an article must, in general, be transported by water. Such are the facts.

So, too, with the important necessaries of life, coal and fire-wood, for the conveyance of both of which the rivers are the usual highways. They are floated to market in flatboats. Neither of them will bear a more expensive mode of transport, though in relation to coal we believe that the employment of cheap steamboats to tow the flats would be an improvement, and would prevent much of the

loss that now occurs from the sinking of these heavy and unmanageable craft.

The flatboat trade is quite important. These boats are constructed by the farmers, and country traders, at interior places, not usually visited by steamboats, and floated out in times of high water, freighted with cattle, horses, grain, whiskey, &c.; but although a freshet is usually required to bring them out of the smaller tributaries, their progress is so slow, that their voyages are often protracted beyond the continuance of the floods, and are prosecuted in all stages of water. They are made almost entirely of wood, by the use of scarce any other tools than the axe, the broad-axe, the saw, and the auger, in all of which our farmers are expert; but little money, and most frequently none, and no aid from the mechanic, are required in their construction. These considerations render them convenient and necessary auxiliaries to trade and agriculture, and entitle them to special consideration. The delays of a retarded current, and of passing locks, would be seriously injurious, if not destructive, to that branch of our navigation.

4. Boats, &c., whether ascending or descending, will be compelled to pass through the locks during all low and medium stages of the river, and can pass over the dams only when the water shall have risen six or eight feet above their crests.

Of course, it is obvious, that the lock walls at every dam must be raised six or eight feet above the crest of the dam, in order to admit the passage of boats through the lock chamber, until the depth of water above the crest of the dam is sufficient to allow the passage of boats over it.

5. The aggregate fall of the Ohio river, between Pittsburgh and its confluence with the Mississippi, is about five

hundred feet, consequently the number of locks, allowing ten feet lift to each lock, will amount to *fifty*, or if the lift be five feet, which would be preferable, the number of locks required would be *one hundred.* The detention, occasioned by passing so many locks, would be very objectionable; so much so, we think, as to render the whole scheme impracticable.

6. By the introduction of locks and dams, the natural navigation would be effectually destroyed, except in high water, during which boats might pass over the dams for a small portion of the year only.

7. The natural navigation of the Ohio is of too much consequence to be sacrificed for any method of artificial navigation that can be devised, and no form of improvement should be tolerated by means of which the natural channels of the river would be closed, for any period, however brief.

8. We are unable to form any opinion as to the effect which might be produced by so many dams, upon the high freshets of the Ohio. If the velocity of the current should be considerably retarded, so that the water should be carried off with less rapidity than heretofore, the volume would be greater, and the rise of water higher. Whether the small proportion, which the height of the dams would bear to the elevation of the whole river section, would so diminish this effect as to render it unimportant, we shall not undertake to decide; but hesitate not to say, that we should think the experiment eminently hazardous. It is not improbable that a few inches, and perhaps a few feet might, by this cause, be added to the floods; and, if so, the results, in the cases of such floods as those of 1832 and 1847, would be very disastrous.

But, while we object to the erection of dams and to

every form of work which, under the name of improvement, shall in any manner obstruct the natural navigation of the river, we do not object to locks, if they can be constructed without dams. We have no theory to advance, and no opinion to give upon this subject. Our government has in its service the best engineers in the world—men of talent, science, experience, and unsurpassed fidelity, to whose sphere of duties such questions properly belong. We only make the suggestion, whether there may not be places where no other dam would be requisite than the bar or rapid creating the obstruction; and where the desired improvement might be made, by cutting a channel along the margin of the river, connecting the upper and lower pools, with depth sufficient for the passage of steamboats, to be protected by heavy walls, and provided with locks. By this arrangement no impediment will be placed in the bed of the river; and, the locks being so constructed as not to drain the pools below their natural level, the navigation of the original channels would remain unchanged. It is supposed that if the locks were kept open during high water, when they would not be in use, the water sweeping through them would carry off the mud, and prevent its deposition. If there be any feasibility in this plan, it is worthy of experiment; but we incline to the belief that locks so constructed, indeed any locks whatever, on this river, would be rendered useless by the accumulation of driftwood.

CHAPTER VI.

The Louisville and Portland canal—its inadequacy—an extravagant tax on commerce—Captain Cram's reports—plans for the improvement of the navigation round the falls.

The obstructions in these rivers consists of rocks, bars, and sunken logs or snags. There are a few points on the Ohio river where rapids are created by ledges of rock; the most important of these are at Captina and Buffington's Island, and Le Tart's Falls, the Falls of Ohio, and the Grand Chain; and there are points where the navigation is not safe for as much water as is contained in the channel, in consequence of the existence of projecting rocks. The removal of rocks, and the improvement of all the rapids, except the Falls of Ohio, could be easily accomplished. With regard to these rapids, and to the whole subject of the obstacles in the upper portion of the Ohio, we beg leave to refer to an able report made in 1835, by Lieut. G. Dutton, of the U. S. engineers, which will be found on file in the War Department. Copious extracts from that report, and other descriptive information, connected with this part of the subject, may be found in the first series of this work.

The most important obstruction in the navigation of the Western rivers, occurs at the Falls of the Ohio, which is too well known to require description. A fall of twenty-five feet in two miles, caused by a ledge of rocks extending across the river, renders this object impassable for

steamboats, except during the high floods which occur usually in the spring, and continue for a few days only at a time. These rapids were formerly avoided by a laborious and expensive portage, extending from Louisville to Shippingsport, a distance of two and a half miles; but they are now passed by means of a canal. This work, which was intended as a facility to our commerce, and a benefit to the whole people of the West, has signally failed in accomplishing the purpose for which it was constructed; and as the government of the United States, with the beneficent view of patronising a work of public utility, became a partner in this canal, it cannot be thought invidious to call the attention of Congress to its deficiencies. The objections to this work are:

1. The contracted size of the locks, which do not admit the passage of the largest class of boats.

2. The insufficiency of the construction of the canal, which being deficient in width and depth, causes great delay, and often serious injury, to passing boats.

3. The enormous and unreasonable tax levied in tolls.

With regard to the first objection, we remark that the Louisville and Portland canal was intended to be a national work, and stands connected with the commerce of the whole West. During the greater part of the year it affords the only outlet for the productions of the larger portion of the Ohio Valley, and the only channel of ingress for the valuable imports of the same region. Such a work should have been constructed upon the most liberal scale, and its benefits extended to every class of the community. This is unfortunately not its character. After many years' experience, in the navigation of our rivers by steamboats, it has been ascertained that boats of a great length are those of the greatest speed, and best

suited to the navigation of our rivers, and the character of our trade. But the length which has been found most convenient is greater than the dimensions of the locks of this canal; and thus the boats which are best adapted to the trade between Pittsburgh, Cincinnati, and other ports on the upper Ohio, and St. Louis or New Orleans, are excluded from that commerce, and a smaller class of boats, which are much less profitable, is exclusively employed.

The second objection is one of not less forcible application to a work of this magnitude. The width of this canal is such, that steamboats cannot pass each other, within it, nor can a loaded boat work her way through, but by a protracted and laborious operation. As two boats passing in opposite directions cannot enter the canal at the same time, the delays encountered here are very great, and add materially to the heavy tax paid more directly in the form of toll, while the scanty dimensions of the channel, both in width and depth, expose boats to the continual danger of injury. If there were no other objections, therefore, to this canal, it is insufficient in point of size, and does not afford the facilities required for the trade at this time; and it must become every year more objectionable in this respect, in consequence of the rapid increase of our trade.

To estimate fully the validity of this objection, it should be stated that these delays occur almost daily, during the busy season, and vary from a few hours to a whole day. The expenses of such a boat will be somewhere from $50 to $100 per day, and that amount, or any large fraction of it, occurring only at each alternate trip, would in the course of a year form a large item, in the account of a single boat; but which multiplied by the number of boats

which suffer by the delay, would give a sum total of actual loss to the commerce of the West, more than sufficient to pay for the annual repairs and custody of such a canal. It is proper to add, that these vexatious delays are inseparable from the nature of this work, which is constructed on a scale too limited for the purposes of its creation, or rather, whose dimensions, originally deemed sufficient, have been outgrown by the increase of the trade; and that we do not suggest them as evincing any delinquency on the part of the company.

The insufficiency of this canal is by no means attributable, as a matter of censure, to the stockholders or their officers. We speak of it only in reference to the wants of our commerce. The work was commenced under the most discouraging circumstances, and was carried forward in the face of formidable obstacles, by an exertion of great enterprise and perseverance. It is a great and useful work, and affords facilities to commerce which, in comparison with the ancient mode of transporting goods round the Falls by portage, cannot be too highly appreciated. It is proper also to state, that before the dimensions of the locks were decided upon, the largest boats then afloat on the Ohio were measured, and the locks were made, as was supposed, of sufficient capacity to pass every description of river craft. The model of our boats has, however, been since changed, and the locks are now found to be entirely too small; while the vast increase of commerce has rendered the canal itself inadequate to the great purpose of its construction.

But the third objection is that which is complained of as most grievous, and which demands the prompt interposition of Congress. In presenting this important subject to the serious consideration of the public, we shall pro-

ceed to show the amount of commerce which passes through this canal—the amount of tolls received by the company—the exorbitant profits in which the government participates as a stockholder—and the unjust burthen imposed upon the owners of vessels navigating the Ohio river.

The following table, taken from the reports of the company, shows the number of vessels which passed the canal, and the receipts of toll, from 1831 to 1847, inclusive:—

Abstract of the Boats that have passed, and Tolls received on the Louisville and Portland Canal.

	Steamboats.	Flat and Keelboats.	Tons.	Amount received.
1831	406	421	76,323	$12,750 77
1832	453	179	70,109	25,756 12
1833	875	710	169,985	60,736 92
1834	938	623	162,000	61,848 17
1835	1,256	355	200,413	80,165 24
1836	1,182	260	182,220	88,343 23
1837	1,501	165	242,374	145,424 69
1838	1,058	438	201,750	121,107 16
1839	1,666	578	300,406	180,364 01
1840	1,231	392	224,841	134,904 55
1841	1,031	309	189,907	113,944 59
1842	983	183	172,755	95,005 10
1843	1,206	88	232,264	107,274 65
1844	1,476	168	304,384	140,389 97
1845	1,585	394	313,741	138,291 17
1846	1,626	283	341,695	149,401 84
1847	1,432	226	307,879	139,900 72
	19,875	5,772	3,698,266	$1,795,603 90

The original subscription of the United States, to the Louisville and Portland canal, was $235,000, by which the government became the owner of two thousand three hundred and fifty shares of the stock. In June, 1833, a dividend was made in stock, for the amount of profit on the tolls up to that time, and interest on the money

expended up to the time of opening the canal; of which the proportion of the United States was five hundred and fifty-two additional shares, making the whole interest of the government two thousand nine hundred and two shares. The remainder of the stock, seven thousand and ninety-eight shares, was owned by individuals, making the whole number of shares ten thousand, and the capital $1,000,000. On this stock, the United States had received in cash dividends $258,378, being $23,378 more than her original subscription and entire advance in money.

It thus appears that the canal, in twelve years, had more than paid for itself in dividends. The objection, however, is not that individuals should reap a profit on their investment, to which they are justly entitled; but that this useful and necessary facility for passing the falls should, by being placed in the hands of individuals, be the means of levying a tax on the trade of the river, so heavy as to be a burthen. To show that this tax is intolerably high, we state the following conclusive facts: A steamboat owned at Cincinnati, and plying regularly between this city and St. Louis, is obliged to pass through this canal. The boat being of three hundred tons burthen, and worth $24,000 when new, has heretofore paid for each passage through the locks sixty cents per ton, or $180, and supposing the number of trips to be *thirty* in a year, the tolls will amount annually to $5,400, which is over twenty-two per cent., on its cost, and in five years, the full term of life of a western steamboat, will have exceeded the first cost of the boat. The toll, however, has lately, and since the above statement was first made, been reduced to *fifty* cents per ton, and a boat of three hundred tons will now pay but $4,500 for thirty trips, and

will not expend her value in tolls in less than five and a half years.

We state another fact, the particulars of which we have received from an authentic source, and which corroborates the instance given above. A boat of one hundred and ninety tons, owned at Cincinnati, has been in the habit of making her trips from this city to St. Louis and back, in two weeks, and has passed the canal *four* times in one month. Her toll, each trip, at $60 per ton, was $114, and her toll for one month was $456, or at the rate of $5,472 per year, which is nearly half the value of such a boat. It may be said, that no boat makes forty-eight trips, or even thirty trips between St. Louis and Cincinnati in a year, as the ice or low water would obstruct the navigation at some seasons, and at others the boat might pass over the falls. But this is no answer to our argument, the object of which is to show that, during the season in which we use this canal, we pay an exorbitant tax which, reduced to a yearly rate, would swallow the value of a boat in a few years.

This is a practical view of the subject, in regard to which there can be no doubt. The passage between St. Louis and Cincinnati is regularly made in from three to four days, and if three days be allowed for lading and unlading at each place, which is more than is required, the fair time for the trip, both ways, will be two weeks. This is in fact about the average time consumed; and during seasons in which the canal is used, these boats do actually pass the lock *four* times per month. The toll being now reduced to fifty cents per ton, a boat of two hundred tons, whose value, at $60 per ton, is $12,000, will pay, for each passage through the locks, $100, or at the rate of $400 per month, and $4,800 per year.

The navigation of the Ohio below Cincinnati, and of the Mississippi below St. Louis, is not obstructed by ice and extreme low water, more than four months in the year; the navigation is open eight months, during which time the boats between Cincinnati and St. Louis may, and actually do run, and are actively employed. The freshets, which enable them to pass over the falls, are few, and of short duration, and should not be taken into view, in any estimate made for practical purposes; the toll, if any, should be such as the owners of boats could afford to pay throughout the season, and so certain that it could be calculated in advance as a regular item in the expenditure of the boat. Now if a boat passes the canal *four* times in a month, or *thirty-two* times in *eight* months, paying fifty cents per ton for each transit, she will pay $16 00 per ton, in the eight months which are comprised in the running season, and in four seasons she will pay *sixty-four* dollars per ton, which is the full value of the boat.

The capital invested in steamboats in the West must be re-produced every five years, as that is the term of the existence of a boat; and if this capital be subject to a tax of from twenty to thirty per cent. in tolls, and eighteen per cent. insurance, those boats which pass the canal will, in five years, pay double their cost, in freight and insurance. In other words, a steamboat, engaged in the regular trade between Cincinnati and St. Louis, which cost $25,000 when new, must earn $75,000, to pay her cost, insurance and tolls, over and above her ordinary expenses, before she can begin to make profits for her owners. This expenditure is only reduced by the occurrence of freshets which enable the boats to pass over the falls, or by occasional trips to other ports.

While our trade is burthened by this enormous tax, we

have shown that, for the use of an insufficient canal, the stockholders are reaping a high annual interest upon their investment, amounting probably to an average of twelve or thirteen per cent.; and the government of the United States is a partner in the gains of the profitable stock, having already received, for their subscription of $235,000, cash dividends amounting to $258,378, and stock amounting to $55,200, amounting, in all, to $313,578.

So that the government has received back in dividends $78,578 more than her investment, and is the holder of nearly one-third of the shares of this money-making corporation.

We repeat that no liberal man would object to paying a fair interest on the investment of those public spirited individuals, who have completed this useful work at their own risk. And however any may object, they have vested rights, which deserve respect, and around which the law has thrown her conservative sanction. The public voice, however, has condemned the levying of a tax on such a highway, and the high rate of the toll has increased the general dissatisfaction. To remedy this evil, an act has been passed by the legislature of Kentucky, authorising the canal company to appropriate the net annual income of the canal to the purchase of stock, held by others than the United States, at a rate commencing at $150 per share, and increasing annually by the addition of the interest on the value of the stock; and when the whole shall be purchased, to surrender the canal to the United States, on condition that the work shall be kept in repair, and that the tolls levied shall be no more than sufficient to pay the expenses of the custody, repairs, &c. There is a further condition, that the United States, after taking possession of the work, shall report annually to the legis-

lature of Kentucky, the amount of the receipts and expenditures, and making the latter body the judge, whether the conditions of the law are complied with.

The stock of the canal, having become a safe and profitable investment, the inducement to the acceptance of this law is by no means strong, and it would doubtless have been rejected, had the stockholders consulted only their present interest. But the universal condemnation of a tax, which all unite in pronouncing insupportably burthensome, indicated to them, in significant language, the impolicy of provoking a high spirited people into an exercise of power, which might, by diverting the commerce into other channels, render their work of little value. They reluctantly consented to carry the act into effect; and they have reported that four hundred and seventy-one shares were purchased from the profits of 1843, and that five hundred shares will be purchased in 1844.

But will the United States await the tardy operation of this law, and will she accept the trust offered by it? If the net receipts of a year will only purchase five hundred shares, it will take *fourteen* years to buy seven thousand shares, at the same price; but as the price of the stock is to be annually increased, it will take longer. If the locks are to be enlarged by the company, and other improvements made, which are urgently and imperatively demanded, and these expenditures deducted from the annual receipts, it will take at least *twenty* years to complete the purchase, and bring about the desired reduction of tolls—a delay to which the Western people are not willing to submit. And if the requisite improvements are to be delayed until the change of ownership shall be consummated, the just expectations of the Western people will be disappointed, for no unnecessary delay, not the delay of a

year without unavoidable necessity, will be viewed with complacency by those who are interested in this navigation.

Neither do we suppose that the United States will accept the work, on the conditions imposed by the law of Kentucky, and hold it subject to the supervisory power of that State. The proposition is unreasonable, and will hardly be insisted upon, when its objectionable character shall be pointed out.

We respectfully advise, we earnestly solicit, that an appropriation be made without delay, for the purchase of this canal, at a price conforming with the value which the stockholders have placed upon it by accepting the terms of the law above alluded to; and that measures be taken to procure the repeal of any law of Kentucky, by which the control of that State over the work is reserved. This purchase can be made, as will be seen from the above data, for a sum not varying far from *one million* of dollars; and by a further expenditure of from *three to four hundred thousand dollars*, in making a new set of locks, to be additional to those now in operation, in deepening the canal, and in widening it in two or three places to admit the passage of boats, the requisite facilities for surmounting this formidable obstruction would be fully and promptly supplied. The canal might then either be supported by the United States and made free, or a small toll might be imposed, sufficient to pay for the repairs and requisite attendance. That toll would probably not exceed *five cents* per ton, or *one-tenth* of the tribute which is now levied upon the industry and enterprise of the Western people.

In making this recommendation, we are influenced in some measure by the consideration that this work can be

purchased as cheaply as a new canal could be constructed of similar length, and equal efficiency, and that such being the case, good faith suggests the purchase of the property from the individuals who hold it under the sanction of a law of Kentucky, and in partnership with the government of the United States, rather than the construction of a rival work by which the value of this property would be destroyed; and we would arrive at the object sooner, by the purchase and improvement of this canal, than by the tedious process of constructing a new work. But if this purchase cannot be effected, or can only be accomplished at an unreasonable price, or subject to burthensome conditions, or vexatious delay, then we respectfully recommend the construction of a new work, upon the most eligible site, to be selected by the engineers of the government.

There is, however, another very important consideration to be taken into view. Although we consider it essential that the government should purchase the Louisville and Portland canal, under any circumstances, it is equally desirable that a new canal should be constructed on the opposite side of the river. If the choice lay between these works, and Congress was restricted to the one or the other, we should be in favor of the purchase of the present canal, for the reasons we have stated. But there is no such restriction; the power of Congress over this subject is not limited, and the expenditure should be commensurate with the necessities of commerce.

There are two reasons why both these canals are required. The first is, that if the Louisville canal be purchased, and its improvements began, before any other mode of passing the Falls shall be provided, the navigation of the Ohio will be interrupted during the progress of the

work, which will certainly occupy one year, and may be protracted through several. During the whole of that time the commerce of the Ohio would be interrupted; nothing could pass the Falls of Ohio except during the brief periods of high water, and the loss to the country *would in one month exceed the whole cost of repairing the present canal and making a new one.* It would cause an absolute paralysis of the entire commerce of the Ohio valley, and produce a wide spread and disastrous crisis. It would occasion immense losses and failures, and overspread the land with alarm and irritation. No prudent government would venture on such an experiment, no high spirited people would bear it. The losses already borne, in consequence of the supineness of the government in regard to these rivers, have awakened the people of the West to a sense of their wrongs, and any addition to the burthen they are now bearing would scarcely be tolerated.

The other reason why we urge the making of a new canal, as well as the improvement of the one now in use, is, that both will be required to afford the necessary facilities. The number of boats daily passing is now too large for one canal, and scarcely a day passes in which boats are not delayed at the locks, waiting for others to pass. Occasionally, and indeed, frequently, a number of steamboats are collected there, awaiting their turn to pass through, and as but one can pass at a time, some of them are detained throughout the day. The loss to the whole commerce is even now very great, from the detention of boats at this point, and will continue to be so, even after the proposed improvement of the canal shall enable it to pass boats with the greatest facility of which such a work is susceptible. What then will be the case when our

trade upon the river shall be doubled, trebled, and even quadrupled, as it is destined soon to be? Is it not evident that one canal will be wholly insufficient? We think there can be no doubt about it.

For these reasons we think that the Western people should insist upon the immediate construction of a canal around the falls, on the Indiana side of the river, as well as the purchase of the Louisville and Portland canal. At the latter, the new locks might be commenced upon the plan recommended in the report of Captain Cram, and such other improvements as could be carried on without obstructing the navigation of the canal, which should be kept open until the completion of the canal on the other side of the river, after which the Louisville and Portland canal should be deepened and widened to the full capacity requisite for so important a work.

To support this view of the subject, I quote from the valuable report of Captain Cram, the following remarks:

"If the wants of the commerce of the Ohio are to be answered by *one* canal around the falls, adapted to both an ascending and descending navigation, for the *present* business, as well as for that of a *few* years to come, I am of opinion that the best mode will be, for the United States either to purchase all the remaining stock of *individuals*, (six thousand one hundred and fifty-one shares only) and the dry dock, and to make improvements in the existing canal during the years 1844, 1845, and 1846, to the amount of $355,298, and commence as soon as possible, charging tolls only sufficient to maintain the canal in perfect order, provided the state of Kentucky will give the United States exclusive jurisdiction over the whole subject; or if the stock cannot be purchased at a fair price,

then the best plan for the United States would be to construct a new canal on the Indiana side.

"Under the most favorable circumstances of water, it would take about two years to make all the required improvements in the existing canal, to the amount of the estimate, $355,298; and in the contingency which ought to be counted, of unusual or extreme high stage of water, at least three years. During all this time it would certainly be very difficult, although it might not be impossible, to economically execute the improvements without stopping the navigation of the canal; and thus the contingency might occur, of being under the necessity of interrupting the present train of business on the river. The number of passages of boats of all classes, through the existing canal, has been at the rate of one thousand four hundred and thirty per year. To interrupt, for a period of two or three years, the regular trade carried on by so many boats, would very seriously derange the whole system of commercial business, in so far as relates to navigation, not only upon the Ohio, but throughout the whole Mississippi valley.

"This evil would be wholly obviated by constructing a new canal on the Indiana side.

"These considerations, together with the greatly increasing commerce of that valley, lead to the question of providing for two canals around the falls of the Ohio; one for a *descending*, and one for an *ascending* navigation. *In the project of two canals*, the proposed passing places in the improvements of the existing canal would of course be dispensed with; but the proposed new locks could not be omitted inasmuch as the existing locks are not large enough for all classes of boats. Also, in the proposed canal on the Indiana side, (route No. 1,) should dispense

with the three passing places, and make only a single instead of a double group of locks.

"In this view of the question of improving the navigation of the falls, the items to be estimated for, to accomplish the end, would be as follows:

New canal on route No 1, Indiana side,	$1,177,802
Improvements in the existing canal,	283,054
Purchase of the existing dry-dock,	50,000
Purchase of six thousand one hundred and fifty-one shares stock, yet belonging to individuals, at $140 per share,	861,140
Total,	$2,371,996

"The total cost, it will be seen, may be varied from the above, by simply inserting a different price for the stock.

"Should this mode of improving that navigation be adopted, the expense of maintaining both canals would be more, by about one half, than for a single canal adapted to both the ascending and descending navigation; and instead of $25,000, as shown in 4, we should have to provide $37,500 annually, for all the necessary repairs, expenses of custody, &c., for both canals. If this sum be realised from tolls, the charge would be about eighteen cents upon each ton of freight, or twelve cents upon each ton of a boat's measurement; but the tolls would diminish in proportion to the increase of business.

"After comparing all the projects discussed in this report, their cost, their merits and demerits, for prospective business as well as for present purposes, it is probable that "the best mode of improving the navigation of the Ohio at the falls," will be to purchase all the remaining six thousand one hundred and fifty-one shares of stock belonging to individuals of the existing canal company, and the dry-

dock, and make improvements in the existing canal, to adapt it to navigation one way,(to the amount of $283,054;) and at the same time construct a new canal on route No. 1, Indiana side, adapted to a navigation in a contrary way, (at a probable cost of $1,177,802,) and charge tolls only sufficient to maintain the canals, &c."

We subjoin an abstract of the boats that have passed, and the tolls received on the canal, from 1831 to 1847 inclusive, by which it will appear that the number of boats, of every description, which passed the canal in 1846, was one thousand nine hundred and nine, instead of one thousand four hundred and thirty, as estimated by Captain Cram, in 1843. For the next two or three years, the average number will not be less than two thousand, which number may be safely assumed as the basis of the argument, while the sum received for tolls will be about $155,000. Should the government therefore purchase this work now, and reduce the tolls to a rate which would produce $25,000 per year, the annual saving to the western commerce would be $130,000.

The number of shares held by individuals in 1843, was six thousand one hundred and fifty-one, while the government owned three thousand eight hundred and forty-nine shares; but at the close of 1846, there were held by individuals but three thousand nine hundred and eighty-two shares, and by the United States six thousand and eighteen.

The report of the canal company, for 1847, shows a balance appropriated to the purchase of five hundred and twenty-six shares of stock, which added to those purchased in the four previous years, will make six thousand five hundred and forty-four owned by the government, or retired, leaving three thousand four hundred and

fifty-six shares owned by individuals, to be hereafter liquidated. It has been suggested that this improvement might be effected by excavating a channel through the falls. The practicability of this plan has not been demonstrated, and even if a safe passage of the falls could be produced by cutting through the rock, we should deprecate the attempt. The natural dam formed by this ledge of rock being removed, a series of rapids or bars in the channel above would probably be produced, which would greatly injure the navigation.

CHAPTER VII.

Upper and Lower Rapids of the Mississippi.

The Upper and Lower Rapids of the Upper Mississippi present formidable obstructions to the navigation of that noble river, and impede the access to one of the most productive and beautiful regions of the habitable globe. These impediments, consisting of ledges of rock which lie across the river, are extensive, and during the seasons of low water render this fine river wholly impassable for freighted boats, which are obliged to be unladen and lighted over the rapids; and causing the expense of freight to increase by double and three-fold, at such seasons. Yet they are of such a character as to be susceptible of removal at a comparitively small expense. Above these rapids the river is navigable to the Falls of St. Anthony, distant from St. Louis nine hundred miles. In their vicinity, and beyond them, lies a wide expanse of country, embracing a large portion of Illinois, Iowa, and Wisconsin, of incomparable, fertility and inexhaustible resources—a region of prairies teeming with vegetative power, and ready cleared to the hand of the husbandman. Equally adapted to the growth of wheat, the rearing of cattle, and the production of wool,—this country already, although in its infancy, affords a large surplus for exportation; and so vast is the extent of its rich lands, that the increase of its staples is great, beyond conception. The country over which, thir-

teen years ago, the militia of Illinois chased the bands of Black-Hawk, and in which the Sauks, the Sioux, and the Winnebagoes contended for mastery, furnished during the past year the freights for two hundred and forty-four steamboats and fifty-five keels!

In the same region are lead mines, in prosperous operation, which supply annually to commerce forty millions pounds of lead, included in the above estimate, worth $1,000,000, and supposed to be capable of supplying that metal in sufficient quantities to meet the demands of the civilized world; while the copper mines, recently opened, are also becoming valuable. To show further the productiveness, of a country so recently a wilderness, and still only known in that character to most of the American people, we state that in 1840, nine counties, in the southern part of Wisconsin, produced one hundred ninety-seven thousand and two hundred and twenty-five bushels of wheat, twenty-five thousand nine hundred and sixty-six head of cattle, forty-five thousand one hundred and thirty-six hogs, and seven thousand five hundred and sixty-four tons of lead. If such are the products of a small and remote district of a newly settled land, how prolific must be the broad region in which it lies! How impossible to calculate the wealth of the Great West, when single counties estimate their products by such imposing figures!

It appears from data kept at St. Louis, that the navigation of the Upper Mississippi was clear of ice, in 1841, eight months, in 1842 eight months and seven days, and in 1843 seven months and eleven days. As the navigation of this vast region is closed by the immutable laws of nature during four months of the year, the duty of the government is the more imperative, to keep it open during

the other eight months, into which all the business done upon its waters must be crowded.

The arrivals of boats from the Upper Mississippi, at St. Louis, during three years, were as follows:—

	Steamboats.	Keelboats.
1841	143	108
1842	195	88
1843	244	55

The emigration to this favored region is great; the recent completion of the Illinois and Michigan canal, and the connection between the Wisconsin and Fox rivers, which cannot be long delayed, will give it peculiar attractions; and as the proprietor of by far the greater part of the domain, the government is invited by interest, as well as by duty, to open the navigable channels of the country, and thus accelerate its settlement, and promote the sale of her own lands.

But we advocate the improvement of this river, as well as the Illinois, the Wabash, and the Ohio, with the more confidence, as two of them are already connected with the lakes by canals, and the other two will soon be similarly connected, and they are thus emphatically great national highways, connecting the north and the south, the east and the west, and bringing distant and apparently discordant interests into harmonious co-operation.

We extract the following remarks from the St. Louis Report:

"The Lower or Des Moines Rapids, of the Mississippi are two hundred and four miles above St. Louis, and beyond the mouth of the Des Moines river, whence they derive their name. Commencing a little above Keokuk, the Rapids extend nearly up to Montrose, or old Fort Des Moines, opposite to which is the town of Nauvoo. The length of the Rapids is estimated at eleven miles,

having a fall of twenty-four feet. 'Here,' says Professor Nicollet, 'the Mississippi tumbles over ledges of a blue limestone, at all times covered with more or less water, and through which many crooked channels have been worn by the action of the current. During low stages of the water, the passage of the Rapids is very difficult, as well in consequence of the shallowness of the water, as the narrowness and tortuousness of the channel, so that the time of practicable steamboat navigation is shortened by nearly three months in the year, which is about the duration of low water in the river.' This, together with the closing of the navigation by winter for nearly four months more, reduces the season of practicable steamboat navigation to about five months in the year. A system of improvements was commenced by Capt. Lee, of the U. S. Corps of Engineers, under the authority of the government, and continued with satisfactory results until the appropriation was exhausted.

"The Upper or Rock River Rapids, so named from their proximity to Rock River, are from fourteen to fifteen miles long, extending from Rock Island to near Port Byron on the left, and Parkhurst, on the right side of the river. The fall, according to Capt. Lee, from the head to the foot of the Rapids, is twenty-five and three-quarters ($25\frac{3}{4}$) feet, and very much of the character of the Lower Rapids. In consequence of the short turns and narrowness of the passes between the reefs, boats cross the current obliquely, and run great risk of destruction. Capt. Lee has demonstrated the practicability of removing these obstacles, so as to afford a safe passage up and down both Rapids, and thus a continuous navigation from the Gulf of Mexico to the Falls of St. Anthony, of two thousand two hundred miles. At a point called the English Turn, where Capt.

Lee worked out a channel eighty feet in width, it is alleged that no accident has occurred since the improvement was made. It has been estimated that the cost of improving both Rapids would be about $260,000. The river and the country above these Rapids are as beautiful and inviting as any part of the Valley of the Mississippi, and the soil offers substantial inducements to settlers, either in fertility or mineral riches. The northern part of Illinois, the new States of Iowa and Wisconsin, the virgin territory of Minesota, and the government itself, are all deeply interested in the perfection of this navigation. The government passes these Rapids with its proceeds of land sales, with its supplies for the military posts at Prairie du Chien and on the St. Peters, and for the Indian tribes situated on their head waters. We are informed, by one of the most experienced and respectable captains in the trade, that, for the last twenty years, there have been running upon the Upper Mississippi an annual average of fifteen steamboats, which have annually paid $3,000 each, for lighterage and detention at the Lower and Upper Rapids, or an annual aggregate of $45,000. The present number of boats running upon that part of the river is stated to be thirty, which, according to the preceding result, are paying $90,000 per annum, simply upon account of the Rapids. This enormous sum is levied upon the produce of the farmers and miners of the upper country.

"By a comparison of tables of freights and charges made when the water was high enough for boats to pass the Rapids without discharging their cargoes, with freight and charges when the water was too low, it has been ascertained that the increased charges are about one hundred and fifty per cent. When the extent of the lead trade of Galena, Wisconsin, and Iowa, is considered, (about

seven hundred thousand pigs in 1845,) the largest portion of which has to be exported when the waters are low; the amount of agricultural and other products, and the imports of necessary articles from other parts of the Union, and from foreign countries, amounting to several millions of dollars annually, all of which is subjected to this increase of freight and charges; and when to this we add the number of travelers, which may be safely set down at from twenty to thirty thousand annually, subject to the same increase of charges on this account; some idea may be formed of the amount of injury which the community sustains, over and above the loss from the detention and injury of boats and cargoes. It is asserted by men practically informed on the subject, that the increase of freights and charges caused by these obstructions would, in any one year, more than quadruple the cost of all needful improvements." *

The following extract from a report made by a Committee of the citizens of Burlington, Iowa, of the business of that town, for the year ending June, 1847, will afford an accurate conception of the effect of the Rapids upon the commerce of that single town:

"They find, after thorough examination of the receipts and shipments of the different mercantile houses, that there have been imported to Burlington, 687 tons salt; 305 tons iron, stoves and castings; 2,784 tons merchandise—making 3,776 tons, at an average freight of $6 per ton, $22,650.

"The amount of produce shipped from Burlington is found to be as follows, viz: 16,354 bushels of oats; 118,228

* Report of committee on western rivers, at Memphis, 1845, A. B. Chambers.

bushels corn; 207,948 do. wheat; 666 do. beans; 500 do. flaxseed; 1,847 do. barley; 32,821 bbls. flour; 384 do. whiskey; 1,643 tons pork, bacon and lard; 150 tons hay; 23 do. dry hides—which is found to be equal to 14,250 tons at an average of $6, is $71,250.

"Number of steamboat arrivals, 524.

"Number of cabin passengers from St. Louis to Burlington, estimated to be 10 to each arrival, 5,230, at an average of $5 each, - - - -	$25,150 00
Number of deck passengers, estimated at 15 to each arrival, 7,845, at an average of $2 50, -	19,612 50
Number of horses, carriages, wagons, &c., 1,000, at an average fare of $5, - - - -	5,000 00
	$144,668 50
From which deduct the probable amount of freight and fare if the obstructions were removed from the Rapids, viz., 3,776 tons freight imported at $2 50	$9,440 00
14,250 tons freight exported at $2 - -	28,500 00
5,230 cabin passengers at $3 - -	15,690 00
1,845 deck, do $1 50 - -	11,767 50
	$79,151 00
To which should be added for losses by detention arising from re-shipping, towing and additional insurance, - - - - -	10,000 00
For loss of keel and flatboats, and their cargoes,	10,500 00
For depreciation in value of all surplus which finds a market through this point, estimated to be, the present year, $504,000, at 10 per cent., -	50,040 00
Estimated loss to steamboat owners, merchants and Insurance offices from stranded boats and loss of cargoes, which your committee have not the means of ascertaining, say, - - - -	$10,000 00
	$159,691 00

"The steamboat arrivals at St. Louis from the Upper Mississippi, for five years, were as follows:

	Steamboats.	Keelboats.
1841,	143	108
1842,	195	88
1843,	244	55
1845,	647	not reported.
1846,	663	do."

The city of Galena, situated in the north-western part of Illinois, on a small tributary of the Mississippi, about 700 miles above St. Louis, and in the vicinity of the lead mines, exports more than any other town above St. Louis, on the Mississippi. Its exports of lead amounted in 1846 to 672,420 pigs, worth about $2,225,000; exports of copper, about $22,000; lumber about $100,000; hides about $14,000; wheat, 150,000 bushels. In 1844, there were 308 steamboat arrivals, of 53,900 tons, in 1846, 333 arrivals, with 58,275 tons.

The country of the upper Mississippi, tributary to St. Louis, may be considered as including Missouri, the north-western half of Illinois, Iowa, and Wisconsin, with a vast tract of unsettled country lying still further to the north and west. With the exception of the settlements in the immediate vicinity of St. Louis, nearly the whole of this tract was a wilderness twenty years ago; a large portion of it within fifteen years. Thirty years ago there were scarcely any inhabitants in Illinois north of Vandalia, which is on the same parallel with St. Louis; and the Indians had the sole possession of Iowa. The writer traversed extensive tracts of that country, between the years 1820 and 1830, while it was yet untrodden save by the foot of the hunter and the Indian, and while the native forest and prairie retained their pristine character, un-

changed by the hand of cultivation. In 1846 Mr. Bradford, in his "Notes on the North Western States," estimates the population at seven hundred and fifty thousand souls, and it may now be safely set down at one million.

This wide region is an almost unbroken plain of rich land. There is no range of mountains within it, and scarcely a tract that could properly be called hilly. Vast plains, sometimes level, often beautifully rolling or undulating, composed of a rich dark loam, of unsurpassed productiveness, spread on every hand. It is the region of the broad prairie—the paradise of flowers and wild honey bees.

The whole of this extensive country is peculiarly congenial to the growth of wheat and other small grain. Not only is the product of the wheat crop large, but the grain remarkably fine; the flour of the St. Louis market being fully equal to that of Baltimore, heretofore considered the best in the Union. The crops of the Indian corn are scarcely less abundant and fine, this region being, in regard to that grain, inferior only to the country lying immediately south of it. The actual products of these grains over so wide a surface is immense; and the quantities of beef, pork, and whisky are consequently great. In the northern parts of this district, the potatoes are excellent, and very productive; and in the southern parts hemp and tobacco are among the great staples.

Lead, iron, and copper are very abundant. The lead mines are sufficiently extensive and productive to supply the world. The iron mountain, of Missouri, is a stupendous mass of that mineral, in so pure a state that the ore is taken from the mine, without the intermediate process of smelting, directly to the forge, and wrought into fabrics of iron. The wife of a distinguished senator from

Missouri presented to President Van Buren a very handsome knife, made in that manner from the ore of the iron mountain, by a blacksmith of the country.

The copper mines have but lately begun to be worked. There is no doubt, however, that the metal exists in great abundance, and is destined to become an important staple for trade and manufacture. Zinc also is found in great plenty, though not brought into use.

CHAPTER VIII.

Western steamboats—origin and early history to the year 1832—list of steamboats navigating the Western rivers down to 1832.

When we consider the unexampled rapidity with which the Western States have acquired population and importance, we are surprised, not only at that fact, but at the inadequate ideas which have heretofore prevailed as to the magnitude and resources of this country. We are a traveling and a calculating people, and it seems strange that those who visited the Western wilds in early times should not have foreseen the events which have since transpired. That they did make golden reports, we are aware; but contrary to all experience in similar cases, those reports have fallen far short of the truth, and all that has been dreamed and prophesied in relation to this region, by its most sanguine admirers, has been more than realised. When a few hunters, encamped in the forests of Kentucky, heard the rumor of the battle of Lexington, and gave that name to the spot on which they reposed, how little could they have imagined, that within the duration of one human life, a town of excelling beauty, and a population remarkable for its intelligence and refinement, would spring to maturity in these shades—or that in the wilderness beyond them, a population would grow up within the same period, superior in number to that which was then contending for independence, against the most

powerful nation of Europe! But when intelligent men, with better opportunities for observation, explored this region after the germs of its greatness had begun to expand, even they had but faint conceptions of its destiny. We shall endeavor to assign a few reasons why this country was thus underrated, and why it has outstripped the largest calculations which were made in its favor.

Fifty years ago, it was known that the Western lands were fertile, and watered by fine rivers, and settlements were made on the eastern sides of the Ohio and Mississippi. But the inhabitants were exposed to the hostile attacks of the Indians, who occupied the whole region to the west and north, except a few spots held by the French. The hostile dispositions of the Indian tribes, and their superiority of numbers, rendered it dangerous to explore any part of the country in which they hunted, and impracticable to visit large portions of it. It was therefore but partially explored, and immense districts, which are now considered in all respects the most desirable, were then totally unknown. As the Indians retired, the country came into notice, as a fine landscape painting is disclosed by the gradual rising of a curtain. The parts that were settled were continually subject to invasion, and the inhabitants dreadfully harrassed. The most shocking enormities were perpetrated; and only the hardiest pioneers ventured to reside near the frontier, or to explore the lands in the vicinity of such dangerous neighbors. Those atrocities no longer occur; the powerful arm of our government, and the mild influence of its pacific institutions, are felt from the Atlantic to the Rocky mountains, and on the remotest frontier, the dwelling of the pioneer is sacred. The murder of a white man by an Indian is now of rare occurrence; more rare than the

murder of white men by each other; and the massacre of a family is no longer apprehended. This happy change has taken place since the last war with Great Britain; and we may attribute the rapid growth of the Western country, within the last twenty-five years, chiefly to the security with which it has been explored and made known, and the safety enjoyed by the people, who have thus been enabled to spread over the surface in every direction.

The reputed unhealthiness of the Western country was a great obstacle to its early settlement. The entire history of our population, from the landing of our ancestors on the Atlantic coast until now, shows that new settlements are generally subject to violent, and rapidly fatal diseases; those west of the mountains have not been more greatly afflicted in this way than others of older date, but the pioneers suffered sufficiently to excite the alarm of the timid, and to give rise to reports which were greatly exaggerated.

The country was at first difficult of access; indeed, for all the beneficial purposes of commerce, it was almost inaccessible. The port of New Orleans, and the country bordering on the Mississippi, were held by Spain, by whom our right to navigate that river was denied. Had the latter privilege been conceded to us, the possession by a foreign power of the only port of entry, and place of deposit, which was accessible to the Western people, must have rendered the trade in that direction precarious, by subjecting it to expensive duties, and frequent interruptions. Setting these difficulties aside, New Orleans was not then, as it is now, a large commercial city; it was a small town, without capital or enterprise, and reputed to be so fatally unhealthy, that its future growth was considered as entirely improbable. And, the navigation from

that place, to our northern ports, on the Atlantic coast, was, as it still remains to a considerable extent, dangerous and expensive; while the ascent of the Mississippi, against its mighty current, by means of the boats then in use, was a slow and most laborious process.

The communication through our own interior was quite as unpromising. The Allegheny ridge formed a barrier, which was then almost impassable. The width of this chain is seldom less than sixty miles; and it presents in its whole extent a series of mountains, cliffs, and chasms, as wild and hideous in their appearance, as they seem insurmountable in their character. No practical man of that day imagined the remote probability of constructing a good road through this district. To climb its precipices, to hew down its rocks, to throw bridges over its gulfs, to pass its headlong torrents—in short, to enable the traveler to journey with ease and rapidity over this alpine region, has been the recent work of genius and enterprise, and the result of a spirit peculiar to our own times.

The purchase of Louisiana, the free navigation of the Mississippi, the increased importance of the New Orleans market, the improvements in the coasting navigation, the New York, Pennsylvania and Ohio canals, and the turnpikes which cross the mountains at various points, may be set down as among the causes which have led to the rapid growth of this country; and it may be added, that many of these events were as unforseen as they have been eminently great and advantageous. Some of them have all the brilliancy of splendid achievement, and all of them have contributed to increase the wealth, and elevate the character of the nation.

The introduction of steamboats upon the Western waters deserves a separate mention, because it has contribu-

ted more than any other single cause, perhaps more than all other causes which have grown out of human skill, combined, to advance the prosperity of the West. The striking natural features of this country are, its magnitude—its fertility—its mineral wealth—the number and extent of its rivers. Its peculiar adaptation to commercial purposes, is evident. The richness of the soil, and the abundance of all the useful minerals, combine to render agricultural labors easy, cheap, and greatly productive. The amount of produce raised for consumption, and for export, is great; and the people are therefore not only able, but liberally disposed, to purchase foreign products. They do, in fact, live more freely, and purchase more amply, than the farmers of any other country. The amount, therefore, of commercial capital employed, as compared with the amount of population, is great; and the vast superficial extent of country, over which these operations may be extended with safety and facility, and whose products may be exchanged, concentrated, or distributed, is unexampled. There is nothing, in the topography of any other country, to compare with the Western rivers. The Mississippi and her tributaries may be navigated in various directions, to the distance of two thousand miles from the ocean; and every portion of this immense plain is intersected by these natural canals. In these respects nature has been prodigal; it was left to human skill and energy to turn her gifts to the best advantage, and never was the intellect of man more usefully employed than in the discovery and successful introduction of steam navigation. It was all that the Western country needed; and the name of Fulton should be cherished here with that of Washington; if the one conducted us to liberty, the other has given us prosperity—the one

broke the chains which bound us to a foreign country; the other has extended the channels of intercourse, and multiplied the ties which bind us to each other.

The rapidity with which new channels of trade have been opened, and are now daily becoming developed, is astonishing; but the improvements in navigation, and in the facilities for transporting merchandise by land and water, have been infinitely greater and more remarkable.

It is needless to do more than mention the Indian canoe, the smallest and rudest of boats, but which, at a period but little beyond the memory of living witnesses, was the only vessel that navigated our western rivers. For the purpose of commerce they were entirely inadequate, and were never used in any regular branch of trade.

Previous to their intercourse with the whites, the canoes of the Indians must have been much more unwieldy, and imperfect, than any that are now in use. They had no tools except the clumsy axes made of stone, of which we see specimens in our museums; and their canoes were made of solid logs by burning away the part intended to be removed. Some of the most distant tribes, who have little trade with our people, still pursue the same laborious and unsatisfactory process. When iron tools were introduced, the canoe assumed the present shape.

The birch canoe is peculiar to the northern regions, where the tree which supplies the bark is found. These also were probably of the most crude and awkward construction, previous to the visits of the French traders, under whose directions they acquired the lightness, strength, and beauty, which have given them their celebrity.

The earliest improvement upon the canoe was the pirogue, an invention of the whites. Like the canoe, this boat is hewed out of the solid log; the difference is, that

the pirogue has greater width and capacity, and is composed of several pieces of timber—as if the canoe was sawed lengthwise into two equal sections, and a broad flat piece of timber inserted in the middle, so as to give greater breadth of beam to the vessel. This was probably the identical process by which the Europeans, unable to procure planks to build boats, began in the first instance to enlarge canoes, to suit their purposes. They were often used as ferryboats, to transport horses across our rivers, and we have frequently seen them in operation, of a sufficient size to effect their object in perfect safety.

These were succeeded by the *barge*, the *keel*, and the *flatboat*. Of the two first, the barge was the largest, had the greatest breadth, and the best accommodations for passengers, the keel was longer, had less depth, and was better fitted to run in narrow and shallow channels. They were navigated by a rude and lawless class of men, who became distinguished as well for their drolleries, as for their predatory and ferocious habits. In the then thinly scattered state of the population, their numbers rendered them formidable, as there were few villages on the rivers, and still fewer settlements, which contained a sufficient number of able bodied men to cope with the crew of a barge, consisting usually of thirty or forty hands; while the arrival of several of these boats together made them completely masters of the place. Their mode of life, and the facilities they possessed for evading the law, were such as would naturally make them reckless. Much of the distance through which they traveled in their voyages was entire wilderness, where they neither witnessed the courtesies of life, nor felt any of the restraints of law; and where for days, perhaps weeks, together, they associated only with each other. The large rivers whose meanders

they pursued formed the boundaries of states, so that living continually on the lines which divided different civil jurisdictions, they could pass with ease from one to the other, and never be made responsible to any.

One of the earliest attempts at an intercourse with New Orleans, by the river, is so remarkable as to deserve a separate mention. In 1776, Messrs. Gibson and Linn, the grandfather of Dr. Linn, now a senator in Congress from Missouri, descended by water from Pittsburgh to New Orleans, to procure military stores for the troops stationed at the former place. They completely succeeded in their hazardous enterprise, and brought back a cargo of one hundred and thirty-six kegs of gunpowder. On reaching the falls of Ohio, on their return in the spring of 1777, they were obliged to unload their boats, and carry the cargo round the rapids, each of their men carrying three kegs at a time on his back. The powder was delivered at Wheeling, and afterwards transported to Fort Pitt.

The character of Mike Fink, "the last of the boatmen," has been rendered familiar to most readers, by the pen of one of our best writers. He was a leader of the men of his own class; and was famous for his herculean strength, his contempt of danger, his frolics, and his depredations. He was a coarse, vulgar, desperate man—yet possessed a degree of humor, hilarity, and openness, that made him remarkable, and conciliated for him a sort of popularity, which caused him to be universally known, and still preserves his name in tradition. In his calling, as master of a boat, he was faithful—a quality which seems to have belonged to most of his class; for it is a singular fact, that lawless and wild as these men were, the valuable cargoes of merchandise committed to their care, and secured by no other bond than their integrity, were always carried

safely to their places of destination, and the traveler, however weak, or however richly freighted, relied securely on their protection.

In the earlier periods of this navigation, the boats employed in it were liable to attacks from the Indians, who employed a variety of artifices to decoy the crews into their power. Sometimes a single individual, disguised in the apparel of some unhappy white man, who had fallen into their hands, appeared on the shore making signals of distress, and counterfeiting the motions of a wounded man. The crew supposing him to be one of their countrymen, who had escaped from the Indians, would draw near the shore for the purpose of taking him on board; nor would they discover the deception until, on touching the bank, a fierce band of painted warriors would rush upon them from an artfully contrived ambuscade. Sometimes the savages crawled to the water's edge, wrapped in the skins of bears, and thus allured the boatmen, who were ever ready to exchange the oar for the rifle, into their power. But the red warriors were often sufficiently numerous to attempt, by open violence, that which they found it difficult to accomplish by artifice, against men as wary, and as expert in border warfare, as themselves; and boldly pursued the boats in their canoes, or rushed upon the boatmen, when the incidents or the perils of their navigation drove them to the shore.

These boats, but rarely using sails, and receiving only an occasional impulse from their oars, descended the stream with a speed but little superior, at any time, to that of the current; while they met with many accidents and delays to lengthen the voyage. A month was usually consumed in the passage from Pittsburgh to New Orleans, while the return voyage was not effected in less than four months,

nor without a degree of toil and exposure to which nothing but the hardiest frames, and the most indomitable spirits, would have been equal. The heavily laden boats were propelled against the strong current by poles, or, where the stream was too deep to admit the use of those, drawn by ropes. The former process required the exertion of great strength and activity, but the latter was even more difficult and discouraging—as the laborer, obliged by the heat of the climate to throw aside his clothing, and exposed to the burning rays of the sun, was forced to travel on the heated sand, to wade through mire, to climb precipitous banks, to push his way through brush, and often to tread along the undermined shore, which giving way under his feet precipitated him into the eddying torrent of the Mississippi. After a day spent in toils which strained every muscle to its utmost power of exertion, he threw himself down to sleep, perhaps in the open air, exposed to the cold damps and noxious exhalations of the lower Mississippi, and the ferocious attacks of millions of musquitoes, and reposed as unconscious of danger, or inconvenience, as the native alligator which bellowed in the surrounding swamps.

The *flatboat* was introduced a little later than the others. It is a rough strong boat, with a perfectly flat bottom, and perpendicular sides; and covered throughout its whole length. Being constructed to float only with the current, it never returns after descending the river. These boats were formerly much used by emigrating families, to transport themselves down the Ohio, and are still built in great numbers on the various tributary streams, and floated out in high water, with produce for New Orleans.

The French, who navigated the northern lakes, the Mississippi, and its tributaries, adopted, in their trade, the use

of the Indian birch canoe. McKenny, in his "Tour to the Lakes," thus describes one of those boats.

"Its length is thirty feet, its breadth across the widest part, about four feet. It is about two and a half feet deep in the centre, but only about two feet near the bow and stern. Its bottom is rounded, and has no keel.

"The materials of which this canoe are built are birch bark and red cedar, the whole fastened together with *wattap*, and gum, without a nail, or bit of iron of any sort to confine the parts. The entire outside is bark—the bark of the birch tree—and where the edges join at the bottom, or along the sides, they are sewn with this *wattap*, and then along the line of the seam it is gummed. Next to the bark are pieces of cedar, shaven thin, not thicker than the blade of a knife—these run horizontally, and are pressed against the bark by means of these ribs of cedar, which fit the shape of the canoe, bottom and sides, and coming up to the edges, are pointed, and let into a rim of cedar about an inch and half wide, and an inch thick, that that forms the gunwale of the canoe, and to these, by means of the *wattap*, the bark and ribs are all sewed; the *wattap* being wrapped over the gunwale, and passed through the bark and ribs. Across the canoe are bars, some five or six, to keep it in shape. These are fastened by bringing their ends against the gunwale, or edge, and fastening them to it with *wattap*. The seats of the voyageurs are along side of, but below the bars, and are of plank, some four inches wide, which are swung, by means of two pieces of rope, passed through each end, from the gunwale."

These boats were so light, and so easily damaged, that precautions were necessary to be taken in loading them, yet the one described above carried not less than two thousand pounds. With these frail vessels the French

navigated the Western rivers, and crossed the largest lakes, carrying on a most extensive traffic. The great peculiarity of this navigation is, that these light canoes are carried with facility from one river to another, or around the rapids and cascades, over which they cannot float. Their lading is accordingly made up into packages, each of which may be carried by one man, and these are transported over the portages, on the backs of the *engagees*, by means of straps passed over the forehead. These boats are still used in the fur trade.

As a curious illustration of the rapid improvement of our Western vessels, and the growth of our trade, I copy the following advertisement from a newspaper called "The Centinel of the Northwestern Territory," under date of Saturday, January 11, 1794, by which it will be seen that at that time four keel boats, carrying probably not more than twenty tons each, were supposed to be sufficient for the trade between Cincinnati and Pittsburgh, and that these were prepared to defend themselves against *enemies.*

"OHIO PACKET BOAT."

"Two Boats for the present will start from *Cincinnati* for *Pittsburgh*, and return to *Cincinnati* in the following manner, *viz:*

"First boat will leave Cincinnati this morning at eight o'clock, and return to Cincinnati, so as to be ready to sail again in four weeks from this date.

"Second boat will leave Cincinnati on Saturday, the 30th inst., and return to Cincinnati in four weeks as above.

"And so regularly, each boat performing the voyage to and from Cincinnati to Pittsburgh *once in every four weeks.*

"Two boats, in addition to the above, will shortly be completed and regulated in such a manner that one boat of the four will set out weekly from Cincinnati to Pittsburgh, and return in like manner.

"The proprietor of these boats, having maturely considered the many inconveniences and dangers incident to the common method hitherto adopted of navigating the Ohio, and being influenced by a love of philanthropy and a desire of being serviceable to the public, has taken great pains to render the accommodations on board the boats as agreeable and convenient as they could possibly be made.

"No danger need be apprehended from the enemy, as every person on board will be under cover made proof against rifle or musket balls, and convenient port holes for firing out of. Each of the boats are armed with six pieces carrying a pound ball; also a number of good muskets, and amply supplied with plenty of ammunition; strongly manned with choice hands, and the masters of approved knowledge.

"A separate cabin from that designed for the men is partitioned off in each boat, for accommodating ladies on their passage. Conveniences are constructed on board each boat, so as to render landing unnecessary, as it might, at times, be attended with danger.

"Rules and regulations for maintaining order on board, and for the good management of the boats, and tables accurately calculated for the rates of freightage, for passengers and carriage of letters to and from *Cincinnati* to *Pittsburgh;* also a table of the exact time of the arrival and departure to and from the different places on the Ohio, between *Cincinnati and Pittsburgh*, may be seen on board each boat, and at the printing office in Cincinnati.

Passengers will be supplied with provisions and liquors of all kinds of the first quality, at the most reasonable rates possible. Persons desirous of working their passage will be admitted on finding themselves; subject, however, to the same order and directions from the master of the boats as the rest of the working hands of the boat's crew.

"An *Office of Insurance* will be kept at *Cincinnati, Limestone, and Pittsburgh*, where persons, desirous of having their property insured, may apply. The rates of insurance will be moderate."

Such were the vessels in which the whole trade of the western rivers was carried on, previous to the year 1811. Nor was the transportation by land farther advanced in improvement. The few roads that crossed the mountains were so wretchedly bad that wagons toiled over them with great difficulty, and a large portion of the merchandise was carried on the backs of horses. Even that was considered a triumphant result of enterprise, and a rapid advance in improvement; for a few years only had then advanced, since Mr. Brown, a delegate from Kentucky, in Congress, had been smiled at as a visionary, by the members of that august body, for asking the establishment of a mail to Pittsburgh, to be carried on horseback once in two weeks. He was told that such a mail was not needed, that it probably would never be required, and that the obstacles of the road were insuperable. That venerable patriot has lived to see the establishment of *two* daily mails on the same route; while the canals, the railways, and the turnpikes that lead to the west, have rendered it accessible, with ease and safety, to every species of vehicle.

We proceed now to give some account of the steamboat

navigation of these rivers, and shall first speak of some early attempts towards the accomplishment of this object.

Mr. James Rumsey, of Berkely county, Virginia, invented a plan for propelling boats by steam as early as 1782, and in 1784 obtained from the legislature of Virginia the exclusive right of navigating her waters with such boats. In 1788, he published his project, in general terms, together with numerous certificates from the most respectable characters in Virginia, among whom was General Washington, all of which assert, that a steamboat was actually constructed which moved, with half her burthen on board, at the rate of three or four miles an hour, against the current of the Potomac, although the machinery was in a very imperfect state. In 1819, his brother, Dr. Rumsey, of Kentucky, built a boat after this model; and at that time it was said that the Rumsey plan united simplicity, strength, economy, and lightness, in a degree far superior to any other. The more complex machinery of Bolton and Watt, Fulton, and Evans, have however been more successful.

In 1785, John Fitch, a watchmaker in Philadelphia, conceived the design of propelling a boat by steam. He was both poor and illiterate, and many difficulties occurred, to frustrate every attempt which he made, to try the practicability of his invention. He applied to Congress for assistance, but was refused; and then offered his invention to the Spanish government, to be used in the navigation of the Mississippi, but without any better success. At length a company was formed, and funds subscribed for the building of a steamboat, and in the year 1788, his vessel was launched on the Delaware. Many crowded to see and ridicule the novel, and, as they supposed, the chimerical experiment.

It seemed that the idea of wheels had not occurred to Mr. Fitch; but instead of them, oars were used, which worked in frames. He was confident of success; and when the boat was ready for the trial, she started off in good style for Burlington. Those who had sneered began to stare, and they who had smiled in derision looked grave. Away went the boat, and the happy inventor triumphed over the scepticism of an unbelieving public. The boat performed her trip to Burlington, a distance of twenty miles; but unfortunately burst her boiler in rounding to the wharf at that place, and the next tide floated her back to the city. Fitch persevered, and with great difficulty procured another boiler. After some time, the boat performed another trip to Burlington and Trenton, and returned in the same day. She is said to have moved at the rate of eight miles an hour; but something was continually breaking, and the unhappy projector only conquered one difficulty to encounter another. Perhaps this was not owing to any defect in his plans, but to the low state of the arts at that time, and the difficulty of getting such complex machinery made with proper exactness. Fitch became embarrassed with debt, and was obliged to abandon the invention, after having satisfied himself of its practicability.

This ingenious man, who was probably the first inventor of the steamboat, wrote three volumes, which he deposited in manuscript, sealed up, in the Philadelphia library, to be opened thirty years after his death. When, or why, he came to the west we have not learned; but it is recorded of him, that he died and was buried near the Ohio. His three volumes were opened about five years ago, and were found to contain his speculations on mechanics. He details his embarrassments and disappoint-

ments, with a feeling which shows how ardently he desired success, and which wins for him the sympathy of those who have heart enough to mourn over the blighted prospects of genius. He confidently predicts the future success of the plan which, in his hands, failed only for the want of pecuniary means. He prophesies that, in less than a century, we shall see our western rivers swarming with steamboats; and expresses a wish to be buried on the shores of the Ohio, where the song of the boatman may enliven the stillness of his resting place, and the music of the steam engine soothe his spirit. What an idea! Yet how natural to the mind of an ardent projector, whose whole life had been devoted to one darling object, which it was not his destiny to accomplish! And how touching is the sentiment found in one of his journals:—"The day will come when some more powerful man will get fame and riches from my invention; but nobody will believe that *poor John Fitch* can do any thing worthy of attention." In less than thirty years after his death, his predictions were verified. He must have died about the year 1799.

"The first steamboat built on the western waters," says a writer in the Western Monthly Magazine, "was the Orleans, built at Pittsburgh in 1811; there is no account of more than seven or eight, built previously to 1817; from that period they have been rapidly increasing in number, character, model, and style of workmanship, until 1825, when two or three boats built about that period were declared by common consent to be the finest in the world. Since that time, we are informed, some of the New York and Chesapeake boats rival and probably surpass us, in richness and beauty of internal decoration. As late as 1816, the practicability of navigating

the Ohio with steamboats was esteemed doubtful; none but the most sanguine augured favorably. The writer of this well remembers that in 1816, observing, in company with a number of gentlemen, the long struggles of a stern wheel boat to ascend Horse-tail ripple, (five miles below Pitssburgh) it was the unanimous opinion, that 'such a contrivance' might conquer the difficulties of the Mississippi, as high as Natchez, but that we of the Ohio must wait for some 'more happy century of inventions.' "

We can add another anecdote to that of our friend which we have quoted. About the time that Fulton was building his first boat at Pittsburgh, he traveled across the mountains in a stage, in company with several young gentlemen from Kentucky. His mind was teeming with those projects, the successful accomplishment of which has since rendered his name so illustrious—and his conversation turned chiefly upon steam, steamboats, and facilities for transportation. Upon these subjects he spoke frankly, and his incredulous companions, much as they respected the genius of the projector, were greatly amused at what they considered the extravagance of his expectations. As the journey lasted several days, and the party grew familiar with each other, they ventured to jest with Mr. Fulton, by asking if he could do this, and that, by steam; and a hearty laugh succeeded whenever the single-minded and direct inventor asserted the power of his favorite element. At length, in the course of some conversation on the almost impassable nature of the mountains, over which they were dragged with great toil, upon roads scarcely practicable for wheels, Mr. Fulton remarked, "the day will come, gentlemen—I may not live to see it, but some of you, who are younger, probably will—when carriages will be drawn over these mountains by steam

engines, at a rate more rapid than that of a stage upon the smoothest turnpike." The apparent absurdity of this prediction, together with the gravity with which it was uttered, excited the most obstreporous mirth in this laughter loving company, who roared, shouted, and clapped their hands, in the excess of their merry excitement. This anecdote was repeated to us by one of that party; who, two years ago, on finding himself rapidly receding from Baltimore in a railroad car, recollected the prediction of Fulton, made twenty years before.

The improvement in steamboats has been so rapid, and the incidents attending them so interesting, that we shall, at the hazard of rendering the subject tedious, give a particular history of a few of the earliest that were built.

1. The *Orleans*, four hundred tons, the first boat built at Pittsburgh, was owned and constructed by Mr. Fulton. Sailed from Pittsburgh in December, 1812, and arrived at New Orleans about the 24th of the same month. She continued to run between New Orleans and Natchez, making her voyages to average seventeen days, and was wrecked near Baton Rouge, in 1813 or 14, by striking a snag, on an upward bound passage.

2. The *Comet*, twenty-five tons, owned by Samuel Smith; built at Pittsburgh by D. French; stern wheel, and vibrating cylinder, on French's patent, granted in 1809. Made a voyage to Louisville in the summer of 1813, descended to New Orleans in the spring of 1814, made two voyages thence to Natchez, and was sold,—and the engine put up in a cotton gin.

3. The *Vesuvius*, three hundred and forty tons, built at Pittsburgh, by Mr. Fulton, and owned by a company at New York and New Orleans. Sailed for New Orleans

in the spring of 1814, commanded by Captain Frank Ogden. She sailed from New Orleans for Louisville, about the 1st of June following; grounded on a sandbar, seven hundred miles up the Mississippi, where she lay until the 3d of December following, when the river rose, and floated her off. She returned to New Orleans, where she run aground a second time on the Batture, where she remained until March 1st, when a rise of water set her afloat. She was then employed some months, between New Orleans and Natchez, under the command of Captain Clemment, who was succeeded by Captain John De Hart; shortly after, she took fire near the city of New Orleans and burned to the water's edge, having a valuable cargo on board. Her hull was afterwards raised and built upon, at New Orleans. She was since in the Louisville trade, was sold to a company at Natchez, and condemned in 1819.

4. The *Enterprise*, forty-five tons, built at Brownsville, Pa., on the Monongahela, by Daniel French, under his patent, and owned by a company at that place. She made two voyages to Louisville in the summer of 1814, under the command of Captain J. Gregg. On the 1st of December, she took in a cargo of ordnance stores at Pittsburgh, and sailed for New Orleans, commanded by Captain Henry M. Shreve, and arrived at New Orleans on the 14th of the same month. She was then despatched up the river in search of two keel boats, laden with small arms, for General Jackson's army, which had been delayed on the way; and returned with the cargoes of these after an absence of six days and a half, in which time she ran six hundred and twenty-four miles. For some time after, she was actively engaged in transporting troops. She made one voyage to the Gulf of Mexico as

a cartel, one voyage to the rapids of Red river with troops, and nine voyages to Natchez. She set out for Pittsburgh on the 6th of May, 1817, and arrived at Shippingsport, (Louisville) on the 30th, twenty-five days out, being the first steamboat that ever arrived at that port from New Orleans. The citizens of Louisville gave a public dinner to Captain Shreve for having accomplished, in twenty-five days, a trip which previous to that time had never been accomplished, by the barges and keel boats, in less than three months. The Enterprise proceeded to Pittsburgh, the command was then given to Captain D. Worley, who lost her in Rock Harbor, Shippingsport.

5. The *Ætna*, three hundred and forty tons, built at Pittsburgh, and owned by the same company as the Vesuvius. Sailed from Pittsburgh for New Orleans in March, 1815, under the command of Captain A. Gale; made the voyage, and then went into the Natchez trade—was commanded by Captain R. De Hart, who made six voyages in her, and then again by Captain Gale.

6. The *Despatch*, twenty-five tons, built at Brownsville, in 1817, on French's patent, and owned by the same company as the Enterprise. She made several voyages from Pittsburgh to Louisville, and one from New Orleans to Shippingsport, where she became a wreck in 1820, and her engine was taken out.

7. The *Buffalo*, three hundred tons, was built at Pittsburgh, by Mr. Latrobe.

8. The *James Monroe*, one hundred and twenty tons, was built at Pittsburgh, by Mr. Latrobe.

9. The *Washington*, four hundred tons, built at Wheeling; contracted and part owned by Captain H. M. Shreve; her engine was made at Brownsville under the immediate direction of Captain Shreve. Her boilers were on the

upper deck, and she was the first boat on that plan, since so generally in use. The Washington crossed the falls, September, 1816, under Captain Shreve, went to New Orleans, and returned to Louisville in the winter. In March, 1817, she went from Louisville to New Orleans and returned in forty-five days. This was the trip that first convinced the despairing public that steamboat navigation would succeed on the Western waters.

10. The *Franklin*, one hundred and twenty-five tons, built at Pittsburgh, by Messrs. Shiras and Cromwell; engine made by George Evans. She sailed from Pittsburgh in December, 1816, was sold at New Orleans, went into the Louisville and St. Louis trade, and was sunk near St. Genevieve, in 1819.

11. The *Oliver Evans*, seventy-five tons, was built at Pittsburgh, by George Evans; engine his patent. Left Pittsburgh, December, 1816, for New Orleans. Burst one of her boilers in April, 1817, at Point Coupee, by which eleven men, chiefly passengers, were killed. Never did much business afterwards.

12. The *Harriet*, forty tons, built at Pittsburgh, owned and constructed by Mr. Armstrong, of Williamsport, Pa. She sailed from Pittsburgh, October, 1816, for New Orleans, crossed the falls in March, 1817, made one voyage to New Orleans, and then run between that place and the Muscle shoals.

We shall not proceed any further with this list, as it would occupy more room than could be usefully devoted to such a purpose. Our object in giving the particulars of the history of a few of the first boats, in their regular order, is to show the progress that was made in the first years of the introduction of steamboats, and the difficulties which frowned upon the enterprise. The first advance

was slow, and the prospects very discouraging. The *fourth* boat that descended the river, was the *first* to re-ascend as far as Louisville, and even then it was considered doubtful whether steamboats could be rendered useful as a mode of navigation for the ascending trade. It was not until 1816, when the boat, which was about the *ninth* in the order of building, having been conducted from Louisville to New Orleans and back in forty-five days, by Captain Henry M. Shreve, the question of practicability was considered as settled.

Many of the obstacles which impeded the rapid advance of steamboat navigation were such as were incident to an infant and imperfect state of the art of constructing both boats and engines; while others were inseparable from the condition of the country. In accounting for the length of the earliest voyages, something must be allowed to both these classes of causes, and among the latter may be mentioned the important facts, that the shores of the Ohio and Mississippi were then comparatively unsettled, fuel was not an article of traffic, but was procured from the growing forest by the crews of the boats, and used in its green state; while accidental injuries were repaired with equal inconvenience and delay.

The *General Pike*, built at Cincinnati, in 1818, and intended to ply as a packet between Maysville, Cincinnati, and Louisville, is said to have been the first steamboat constructed on the Western waters for the exclusive convenience of passengers. Her accommodations were ample, her apartments spacious and superbly furnished, and her machinery of superior mechanism. She measured one hundred feet keel, twenty-five feet beam, and drew only three feet three inches water. The length of her cabin was forty feet, the breadth twenty-five feet, in addi-

tion to which were fourteen state rooms. The boats previously built had been intended solely for the transportation of merchandise; these objects have subsequently been successfully united.

The *Calhoun*, eighty tons, built at Frankfort, in 1818, the *Expedition*, one hundred and twenty tons, and the *Independence*, fifty tons—the two last built at Pittsburgh—were constructed for the exploration of the Missouri river, in what was popularly termed the Yellow Stone Expedition, projected by Mr. Calhoun, while Secretary of War. The Independence was the first steamboat that ascended the powerful current of the Missouri.

The *Post Boy*, two hundred tons, built at New Albany, by Captain Shreve and others, in 1819, was intended for the conveyance of the mail between Louisville and New Orleans, under an an act of Congress, passed in March, 1819. This was the first attempt on the Western waters to carry the mail in steamboats.

The *Western Engineer* was built near Pittsburgh, in 1818, under the the direction of Major S. H. Long, of the United States topographical engineers, for the expedidion of discovery to the sources of the Missouri, and the Rocky Mountains, which was afterwards so honorably accomplished by himself and his companions. This boat ascended as high as the Council Bluffs, about six hundred and fifty miles above St. Louis, and was the first steamboat that reached that point.

For further particulars with regard to individual boats, we refer to copious alphabetical tables, which will accompany these notes. We proceed to present some calculations which we have collected from different but authentic sources.

The following remarks are from the pen of Morgan Neville, Esq., and were written in 1829:

"The average cost of a steamboat is estimated at $100 per ton; the repairs made during the existence of a boat amount to one half the first cost. The average duration of a boat has hitherto been about four years; of those built of locust, lately, the period will probably be two years longer. The amount of expenditure in this branch of business on the western waters, then, for the last ten years, will in some measure be shown by the following calculation:

56,000 tons, costing $100 per ton, amount to -	$5,600,000
Repairs on the same, - - - -	2,800,000
Expending in building and repairing in ten years,	$8,400,000

"The annual expenditure of steamboats is very difficult to be arrived at: the importance of this expenditure, however, to the towns on our rivers, and to the whole extent of country running along their shores, may be estimated from the following calculation of the item of fuel alone, for one year—take the present year, 1829. We have now in operation above two hundred boats, the tonnage of which may be stated at thirty-five thousand tons.

"It is calculated that the business of each year lasts eight months; deduct one fourth for the time lost in port, and we have six months, or one hundred and eighty days, of running time. Each boat is presumed to consume one cord of wood, for every twelve tons, every twenty-four hours.

The 35,000 tons then consume, *per day*, -	2,917 cords.
Or, during the six months, - - -	525,060 cords.

"The price of wood varies from $1 50, to $5 per cord; a fair average would place it at $2 25 per cord.

This makes the expenditure for fuel alone, on the banks of our rivers, $1,181,385, for this year. The other expenditures, while running, are calculated, by the most experienced and intelligent owners, to be equal to $1,300,000, which gives the total expenditure for 1829, at $2,481,385.

"This calculation and estimate, then, which are both made lower than the facts justify, present these results:

The amount of first cost of steamboats, since 1817,	$5,600,000
Repairs on the same, - - - -	2,800,000
Total amount of expenditure, produced by the introduction of steamboats, for building and repairs,	$8,400,000

"We cannot better illustrate the magnitude of the change in every thing connected with western commerce and navigation, than by contrasting the foregoing statement, with the situation of things at the time of the adoption of steam transportation, say in 1817. About twenty barges, averaging one hundred tons each, comprised the whole of the commercial facilities for transporting merchandise from New Orleans to the "Upper country;" each of these performed one trip down and up again to Louisville and Cincinnati within the year. The number of keelboats employed in the upper Ohio cannot be ascertained, but it is presumed that one hundred and fifty is a sufficiently large calculation to embrace the whole number. These averaged thirty tons each, and employed one month to make the voyage from Louisville to Pittsburgh, while the more dignified barge of the Mississippi made her trip in the space of one hundred days, if no extraordinary accident happened, to check her progress. Not a dollar was expended for wood, in a distance of two thousand miles, and the dweller on the banks of the Ohio

thought himself lucky if the reckless boatmen would give the smallest trifle for the eggs and chickens which formed almost the only saleable articles on a soil whose only fault is its too great fertility. Such was the case twelve years since. The Mississippi boats now make five or six trips within the year, and are enabled, if necessary, within that period, to afford to that trade one hundred and thirty-five thousand tons. Eight or nine days are sufficient, on the upper Ohio, to perform the trip from Louisville to Pittsburgh and back. In short, if steam has not realised the hyperbole of the poet in 'annihilating time and space,' it has produced results scarcely surpassed by the introduction of the art of printing."

From another valuable article of the same gentleman, we copy the following very interesting remarks:

"On the first day of January, 1834, an official list of steamboats, from an authentic source, gives the whole number of two hundred and thirty, then in existence, whose aggregate amount of tonnage is equal to about thirty-nine thousand tons. Allowing the cost of building at a rate much lower than the rule adopted three years since, the capital now invested in this stock will exceed $3,000,000. The expense of running may be put down nearly as contained in the following scale:

60 boats over 200 tons, 180 days at $140 per day,	$1,512,000 00
70 boats from 120 tons to 200, 240 running days, $90 per day,	1,512,000 00
100 boats under 120 tons, 270 running days, $60 per day,	1,620,000 00
Total yearly expenses,	$4,644,000 00

"This sum may be reduced to the different items producing it in the following proportions, viz:

For wages, 36 per cent., equal to - -	$1,671,840 00
" wood, 30 per cent., equal to - -	1,393,200 00
" provisions, 18 per cent., equal to - -	835,920 00
" contingencies, 16 per cent., equal to - -	743,040 00

"This result is truly striking to those who were accustomed to the state of things on our rivers within twenty years. The difference in the amount of wages paid is in itself very considerable; but the item of fuel is one created exclusively by steamboats; and when it is considered that nearly $1,500,000 is expended every year, at a few points on the Mississippi valley, it presents a vast field for speculation. The immense forests of beech and other timber, unfit for agricultural purposes, were, before, not only useless but an obstacle to the rugged farmer, who had to remove them before he could sow and reap. The steamboat, with something like magical influence, has converted them into objects of rapidly increasing value. He no longer looks with despondence on the denseness of trees, and only regrets that so many have already been given to the flames, or cast on the bosom of the stream before him.

"At the present period, the steamboats may be considered as plying as follows, viz:

25 over 200 tons, between Louisville, New Orleans, and Cincinnati, measuring - - -	8484 tons.
7 between Nashville and New Orleans, measuring	2585 "
4 between Florence and New Orleans, -	1617 "
4 in the St. Louis trade, - - -	1002 "
7 in the cotton trade, - - - -	2016 "
57 boats not in established trades, from 120 to 200 tons,	8641 "
The balance under 120 tons in various trades,	14,655 "
	39,000

"In the New Orleans and Louisville trade, the boats over two hundred tons make about one hundred and fifty trips in prosperous seasons; those of smaller size make

from fifty to sixty trips. But to go into an estimate of the number of voyages made by the boats in the different trades is impossible, because no regular data are furnished, and the result depends upon a variety of contingencies."

"Previous to 1817, about twenty barges afforded the only facilities for transporting merchandise from New Orleans to Louisville and Cincinnati. These, making but one trip in the year, gave the means of bringing up only two thousand tons. The present tonnage in this trade exclusively, having been stated to be eight thousand eight hundred and eighty-four tons, gives the amount employed, calculating one hundred and fifty trips in the season, to be fifty thousand nine hundred and four tons; a cause capable of producing a revolution in sixteen years hardly equaled in the annals of history. The effects upon western commerce have been immense. The moral changes alone which are felt throughout the west on prices is almost incalculable: the imported article has fallen in a ratio equal to the increased price of western products. In looking back at the old means of transportation, we cannot conceive how the present demand and consumption could have been supplied by them.

"To those who have been acquainted with the early mercantile history of our country, when it was no uncommon thing for a party of merchants to be detained in Pittsburgh from six weeks to two months, by low water, or ice, the existing state of things is truly gratifying. The old price of carriage of goods, from the Atlantic seaboard to Pittsburgh, was long estimated at from $5 00 to $8 00 per hundred pounds. We have instances in the last five years, of merchandise being delivered at the wharf of Cincinnati for $1 00 per hundred pounds, from Philadelphia, by way of New Orleans.

"It may not be useless or uninteresting to give an idea of the *mortality* among steamboats in a given time. It is not pretended that any decided inference can be drawn from this statement, or that the facts go to establish any fixed rule. But under the present situation of steamboat discipline and regulation a tolerably fair conclusion can be drawn from it. Taking the period then of two years, from the fall of 1831 till that of 1833, we have a list of boats gone out of service, of *sixty-six;* of these *fifteen* were abandoned, as unfit for service; *seven* were lost by ice; *fifteen* were burnt; *twenty-four* snagged, and *five* destroyed by being struck by other boats. Deducting the *fifteen* boats abandoned as unseaworthy, we have *fifty-one* lost by accidents peculiar to the trade. In number this proportion is over *twelve per cent.* per annum; in tonnage the loss is upwards of ten per cent. Amount snagged, three thousand seven hundred and twenty-one tons; amount burned, two thousand three hundred and thirty tons.

A curious fact was ascertained by a committee of gentlemen, who were appointed a few years ago, by a number of steamboat owners, to investigate the whole subject. They satisfied themselves, that although the benefits conferred on our country, by steam navigation, were incalculable, the stock invested in boats was, as a general rule, a losing investment. In a few cases, owing to fortuitous events, or to the exercise of more than usual prudence, money has been made; but the instances are so few as not to affect the rule. One gentleman, who has been engaged for years in the ownership of steamboats, and has been peculiarly fortunate, in not meeting with any loss by accident, assured the writer, that his aggregate gain, during the whole series of years, was only about six per cent.

per year, on the capital invested. These facts go far towards accounting for the enormous proportion of accidents and losses which occur upon our rivers. A few instances, in which large profits were realised, induced a great number of individuals to embark in this business, and the tonnage has always been greater than the trade demanded. The accidents, which are almost wholly the result of bad management, were set down as among the unavoidable chances of the navigation, and instead of adopting measures to prevent them, they were deliberately subtracted from the supposed profits, as matters of course. As the boat was not expected to last more than four or five years, at best, and would probably be burnt, blown up, or sunk within that period, it was considered good economy to reduce the expenditures, and to make money by any means, during the brief existence of the vessel. Boats were hastily and slightly built, furnished with cheap engines, and placed under the charge of wholly incompetent persons; the most inexcusable devices were resorted to, to get freight and passengers, and the most criminal indifference to the safety of the boat and those on board, observable during the trip.

The writer was once hurried from Louisville to Shippingsport, two miles below, without his breakfast, and in the rain, to get on board a boat which was advertised to start at eight o'clock on that morning. During the whole day, passengers continued to come on board, puffing and blowing—in the most eager haste to secure a passage—each having been assured by the captain or agent, that the boat would start in *less than an hour*. The next day presented the same scene; the rain continued to fall; we were two miles from the city, lying against a miry bank which prevented any one from leaving the boat—the fires

were burning, the steam hissing, and the boat *only waiting for the captain*, who would be on board in a few minutes. Bye and bye the captain came—but then we must wait a few minutes for the clerk, and when the clerk came, the captain found that he must go up to town. In the meanwhile passengers continued to accumulate, each decoyed alike by the assurance that the boat was about to depart. Thus we were detained until the *third day*, when the cabin and deck being crowded with a collection nearly as miscellaneous as the crew of Noah's ark, the captain thought proper to proceed on his voyage. It was afterwards understood that when the captain began to collect passengers, a part of his engine was on shore, undergoing repairs which could not be completed in less than two days, yet during the whole of those two days were the fires kept up, and gentlemen and ladies inveigled on board, in the manner related.

We mention this to show the kind of deceptions which have been practised. This, it is true, was an extreme case, but although the detention is not usually so great, nor the deceit so gross, it is not uncommon for steamboat captains and agents to deceive passengers by the most egregious misrepresentations.

The fact is important, not merely as showing the inconveniences to which travelers are exposed, but as explaining one of the causes of the numerous accidents on the western waters—which is, *bad faith*. The man who will do one dishonest act, will do another. The agent or officer, who will deliberately kidnap men, by the assurance that he will start to-day, when he knows that he will not start until to-morrow, and the owner who will permit such conduct, will not shrink at any act by which he may think his interest likely to be promoted—and

having insured the boat, will risk the lives of the passengers, by running at improper seasons, and other hazards, by which time may be saved, and the expenses of the trip diminished.

The danger of injury to boats from snags has now become greatly diminished in the Mississippi, and has almost entirely ceased in the Ohio, in consequence of the measures adopted for the removal of those obstacles.

The burning of boats must be the result of carelessness; and the dreadful consequences arising from collision are produced by negligence and by design. There is scarcely a conceivable case in which boats may not avoid running against each other in the night; and there are many instances in which the officers of steamboats have been induced, by a ferocious spirit of rivalry, or some other unworthy motive, to run against weaker boats in such a manner as to sink them instantly.

It is proper however to state, that the accidents occuring on steamboats have been greatly magnified by premature and inaccurate newspaper reports, and that they have been much fewer and less fatal than has generally been supposed.

It is also true, that much of the evil alluded to is attributable to the precipitancy and culpable negligence with regard to their own safety and comfort of the passengers. The accidents are almost wholly confined to insufficient or badly managed boats, and the traveler who would be cautious in embarking only in those of the more respectable class would almost uniformly insure himself against danger. A choice of boats, embracing every variety, from the best to those which are wholly unseaworthy, is presented at all our principal places of embarkation. Yet such is the feverish impatience of delay, evinced by most

travelers in our country, that the great majority hasten on board the first boat which offers, regardless of her character, and only anxious to be moving forward, under any discomfort, and at every hazard. The bad boats receive undue patronage, the best do not meet the preference to which they are entitled, and are not compensated for the extra expenditure bestowed upon their outfit and management; and the inducements to accommodate the public well being weakened, neither the owners nor officers of steamboats feel the same solicitude for the reputation of their boats, nor the same degree of responsibility, which would occur if the public patronage was more judiciously bestowed.

The following remarks occur in a letter to the Secretary of the Treasury, from Mr. William C. Redfield, agent of the steam navigation company at New York, and are considered as embracing the steam navigation of the whole union:

"The contests for speed, or practice of racing, between rival steamboats, has been the cause, and perhaps justly, of considerable alarm in the community. It is remarkable, however, that as far as the information of the writer extends, there has no accident occurred to any boiler which can be charged to a contest of this sort. The close and uniform attention which is necessarily given to the action and state of the boilers and engines, in such contests, may have had a tendency to prevent disaster. But this hazard, as well as the general danger of generating an excess of steam, is greatly lessened by the known fact, that in most steamboats the furnaces and boilers are not competent to furnish a greater supply of steam than can be used with safety, with an ordinary degree of attention on the part of the engineers.

"The magnitude and extent of the danger to which passengers in steamboats are exposed, though sufficiently appalling, is comparatively much less than in other modes of transit with which the public have been long familiar; the accidents of which, if not so astounding, are almost of every day occurrence. It will be understood that I allude to the dangers of ordinary navigation, and land conveyance by animal power on wheel carriages. In the former case, the whole or greater part of both passengers and crew are frequently lost, and sometimes by the culpable ignorance or folly of the officers in charge, while no one thinks of urging a legislative remedy for this too common catastrophe. In the latter class of cases, should inquiry be made for the number of casualties occurring in various districts in a given number of years, and the results fairly applied to our whole population and travel, the comparatively small number injured or destroyed in steamboats would be matter of great surprise to those not accustomed to make such estimates upon passing events. It is also worthy of notice, that if the average annual loss of life by the electric stroke were ascertained in the manner above proposed, the results would probably show a loss of life by this rare casualty far exceeding that which is occasioned by accidents in steamboats."

We extract, from an interesting report of a committee of the House of Representatives, in Congress, made in 1832, by Mr. Wickliffe, of Kentucky, the following tabular statement of the steamboat accidents in the United States previous to that date.

LIST OF STEAMBOAT EXPLOSIONS which have occurred in the United States, with remarks thereon, by W. C. Redfield.

Year explod.	Names.			Place of Explosion.	Killed.	Wound.
1817	Constitution,		(h. p.)	Mississippi,	13	
	General Robinson,		(h. p.)	do.	9	
	Yankee,		(h. p.)	do.	4	
	Heriot,		(h. p.)	do.	1	
1824	Etna,		(h. p.)	New York bay,	13	
1828	Grampus,		(h. p.)	Mississippi,	—	
	Barnet,		(h. p.)	Long Island Sound,	1	
1830	Helen McGregor,		(h. p.)	Mississippi,	33	14
	Caledonia,		(h. p.)	do.	11	11
	Car of Commerce,		(h. p.)	Ohio river,	28	29
	Huntress,		(h. p.)	Mississippi,	—	
	Fair Star,		(h. p.)	Alabama,	2	
	Porpoise,		(h. p.)	Mississippi,	—	
Previous to 1825.	Enterprise,	cop. boiler,	(l. p.)	Charleston, S. C.	9	4
	Paragon,	do.	(l. p.)	Hudson river,	1	1
	Alabama,		(l. p.)	Mississippi,	4	
	Feliciana,		(l. p.)	do.	2	
	Arkansas,		(l. p.)	Red river,	4	
	Fidelity,	cop. boiler,	(l. p.)	New York harbor,	2	
	Patent,	do.	(l. p.)	do.	5	2
	Atalanta,	do.	(l. p.)	do.	2	
	Bellona,	do.	(l. p.)	do.	2	
	Maid of Orleans,	do.	(l. p.)	Savannah river,	6	
	Raritan,	unknown,	(l. p.)	Raritan,	1	
	Eagle,	do.	(l. p.)	Chesapeake,	2	
	Bristol,		(l. p.)	Delaware river,	—	1
	Powhatan,	cop. boiler,	(l. p.)	Norfolk,	2	
1824	Jersey,	do.	(l. p.)	Jersey city,	2	
1825	Tesch,		(l. p.)	Mississippi,	—	
	Constitution,		(l. p.)	Hudson river,	3	
	Legislator,		(l. p.)	New York harbor,	5	2
1826	Hudson,		(l. p.)	East river,	—	1
	Franklin,		(l. p.)	Hudson river,	1	
	Ramapo, in Jan.		(l. p.)	New Orleans	5	2
	do. in Mar.		(l. p.)	do.	1	1
1827	Oliver Ellsworth		(l. p.)	Long Island Sound,	3	
1830	Carolina,		(l. p.)	New York harbor,	1	
	Ch. J. Marshall,	cop. boiler,	(l. p.)	Hudson river,	11	2
	United States,		(l. p.)	East river,	9	
1831	General Jackson,		(l. p.)	Hudson river,	12	13

List of Steamboat Explosions—Continued.

When explod.	Names.		Place of Explosion.	Killed.	Woun.
	Cotton Plant,		Mobile,		
1816	Washington,	(h.p.)	Ohio river,	7	9
1826	Macon,		South Carolina,	4	
1827	Hornet,	(l.p.)	Alabama,	2	2
1826	Susquehannah,		Susquehannah,	2	
1827	Union,	(h.p.)	Ohio river,	4	7
1830	Wm. Peacock, stovepipe,		Buffalo,	15	
	Tally-ho,	(h.p.)	Cumberland river,	—	
	Kenhawa,	(l.p.)	Ohio river,	8	4
	Atlas,		Mississippi,	1	
	Andrew Jackson,		Savannah river,	2	
1831	Tri-color,	(l.p.)	Ohio river,	8	8

RECAPITULATION.

		Killed.	Wounded.
13	High pressure accidents, - - - - -	115	54
27	Low pressure do. - - - - -	95	29
12	Character of engines unknown, supposed to be chiefly high pressure,	46	21
52	Total,	256	104

"In some of the principal accidents comprised in the foregoing list, the number of killed includes all who did not recover from their wounds. In other cases, the numbers killed are as given in the newspapers of the day, and some of the wounded should perhaps be added. In some few instances no list has been obtained, and possibly in some no loss of life has occurred. The accounts of some of the minor accidents may have been lost sight of or overlooked in my files. *In making an approximate estimate of the whole number of lives which have been lost in the United States by these accidents, I should fix it three hundred.*

"Although this is a melancholy detail of casualties, yet it seems less formidable when placed in comparison with the ordinary causes of mortality, and especially when contrasted with the insatiate demands of intemperance and ambition. It is believed that it will appear small when compared with the whole amount of injury and loss which has been sustained by traveling in stages and other kinds of carriages. More lives have probably been lost from sloops and packets on the waters of this state since the introduction of steamboats, than by all the accidents in the latter, though the number of passengers exposed has been much smaller. In one case that occurred within a few years, thirty-six persons were drowned on board a sloop in the Hudson river, and many instances, involving the loss of a smaller number of lives; and one case occurred not long since, on Long Island sound, which resulted in the loss of twelve or fourteen individuals.

"It will be seen, by reference to the foregoing list, that, of twenty-five lives that have been lost on board of New York steamboats previous to the case of the Chief Justice Marshall, and excluding the case of the Etna, only *one*

passenger is included in the number. Even in the more fatal cases which are here excluded, and in all accidents of this nature, the chief loss is sustained by the crew and officers attached to the boats, who, by the nature of their employments, are compelled to encounter by far the greatest portion of the hazard.

In the year 1832 it was estimated that, besides the steamboats, there were four thousand flat boats annually descending the Mississippi, whose aggregate measure would be one hundred and sixty thousand tons. As these do not return, the loss on them would amount to $420,000, and the expense of loading, navigating and unloading them $960,000—making the whole annual expenditure upon this class of boats $1,380,000.

In the same year the aggregate cost of steamboats, the expenses of running them, interest, wear and tear, wood, wages, and subsistence of crews and passengers, was estimated at $5,906,000.

The total expenditure on steam and flatboats was, according to this calculation, $7,286,000.

The value of the produce exported in these boats, together with the labor expended in and about them, was estimated at $26,000,000.

The different descriptions of boats navigated on the western rivers, in that year, were supposed to give employment to sixteen thousand nine hundred men, namely:

To mechanics and laborers employed in building 20 steamboats, and repairing others,	$1,700
Wood cutters,	4,400
Crews of steamboats,	4,800
Building flatboats,	2,000
Navigating flatboats to New Orleans,	4,000
Total,	$16,900

But adding to those who are directly engaged the much larger number who are indirectly employed in making engines, and in furnishing, supplying, loading and discharging boats, the whole number of persons deriving subsistence from this navigation, in 1832, was supposed to be ninety thousand. That number has since been greatly increased. During the last season there was built at Pittsburgh and the neighboring towns about twenty-five steamboats, at Cincinnati and its neighborhood about twenty-five.

From 1822 to 1827 the loss of property on the Ohio and Mississippi, by snags, including steam and flatboats, and their cargoes, amounted to $1,362,500. Loss in the in the same items from the same cause, from 1827 to 1832, $381,000.

We close this part of our subject with the following extracts from two very interesting articles published in the Wheeling Gazette, since our table of steamboats was compiled:

"We are informed on good authority that the number of boats built the present year between Louisville and Pittsburgh, including those places, will not fall short of fifty. About thirty-five of these are for distant parts of the country—for the southern and westernmost States: the remaining fifteen will be added to our river trade, increasing the number of boats thus employed to about sixty. Supposing the amount of freight conveyed in each boat to be forty tons down and twenty up, some opinion may be formed of the amount of merchandise transported yearly upon the Ohio. The river may be estimated to be navigable from six to eight months in the year, and each boat to perform twelve trips from Wheeling to Louisville and back. Each boat, then, transports twelve times forty tons down, and half this quantity up, equal to seven hundred

and twenty tons. This multipled by sixty, the number of boats, gives forty-three thousand two hundred tons as the gross amount of merchandise transported yearly in steamboats upon the Ohio.

To fix the value of this merchandise is not so easy. Yet something like accuracy may be obtained. It is said that a wagon load of dry goods, weighing two tons, will cost about $4,000, and that western merchants who purchase $8,000 worth receive them generally in two wagon loads. This would make a ton of dry goods worth $2,000. As grosser and heavier articles, however, are sent down the river in large quantities, the value per ton may be rated at $500. Forty times five hundred gives $20,000 as the value of each cargo; this, multiplied by twelve, gives $240,000 as the amount conveyed by each boat during the season; and this multiplied by sixty, the number of boats, gives the sum of $14,800,000 as the value of the down freight in a single year. This is independently of the merchandise conveyed in keel and flatboats, and the immense amount of lumber which almost covers the face of the river in the spring season. The value of the merchandise transported up the river may be estimated at $1,500,000. Making the total value of merchandise, transported in steamboats yearly on the Ohio, upwards of $16,000,000.

The following table shows the distances from each other of the places named, and from Wheeling, with the prices of passage. It is proper to observe that these are established rates, but that some boats charge less, the prices depending, in some degree, upon the number of boats in port, and the abundance or scarcity of passengers.

UP THE RIVER.	M	M	$ c
Wheeling to Wellsburgh, Ohio, -	16		75
Steubenville, Ohio, - -	7	23	1 00
Wellsville, do - - -	20	43	1 50
Beaver, Pennsylvania, - -	26	69	2 50
Pittsburgh, do - - -	27	96	3 00
DOWN THE RIVER.			
Marietta, Ohio, - - -	82		2 50
Parkersburgh, Va., - - -	10	92	2 50
Point Pleasant, do - -	78	170	5 00
Gallipolis, Ohio, - - -	3	173	5 00
Guyandotte, Va., - -	37	210	6 00
Portsmouth, Ohio, - - -	50	260	7 00
Maysville, Kentucky, - -	42	307	8 00
Ripley, Ohio, - - -	12	319	9 00
Cincinnati, - - -	46	355	10 00
Port William, mouth of Kentucky, -	79	434	11 00
Madison, Indiana, - -	13	447	11 00
Westport, Kentucky, - -	20	467	12 00
Louisville, - - -	20	487	12 00
Rome, Indiana, - - -	100	587	15 00
Troy, - - -	35	622	15 00
Yellow Banks, Kentucky, - -	25	647	15 00
Evansville, Indiana, - -	40	687	18 00
Henderson, Kentucky, - -	12	699	18 00
Shawneetown, Illinois, - -	53	752	18 00
Smithland, mouth of Cumberland, -	63	815	18 00
Mouth of Ohio, - - -	66	881	20 00
New Madrid, Mo. - - -	75	956	22 00
Memphis, Tenn., - -	150	1106	25 00
Helena, Arkansas Territory, - -	85	1191	26 00
Vicksburgh, Miss., - -	307	1498	30 00
Natchez, - - - -	110	1608	30 00
New Orleans, La., - -	300	1908	35 00

The above prices of passage include boarding. The prices of deck passage are about one-fourth of these, the passengers finding themselves. Thus to Louisville, the deck passage is $3, cabin $12; to New Orleans, deck,

$8, cabin $35. The deck is covered and contains berths, but it is a very undesirable way of traveling. The passage to Louisville is generally performed in two and a half days, and to New Orleans from eight to ten; returning, nearly double this time. The ordinary speed of the boats is twelve miles an hour down the river, and six up.

Where large parties apply together for passage, or where emigrating families apply, a considerable reduction is often made. We will mention the case of a family from Maryland, who took passage on the 27th inst., as one in point, and as furnishing emigrants with some information they may like to hear. The family consisted of fifteen persons, (nine adults and six children,) five of whom were slaves. There were also three horses, a wagon, and a wagon load of baggage. They wished a passage to St. Louis, and, on making application to the master of the only boat in port on their arrival here, were told that the fare would be $20 for each adult in the cabin, $6 for deck passage, $15 for each horse, (the owner finding them,) and the usual rates of freight for the baggage; or, to lump the whole, $250. Rather than pay this, the head of the family preferred waiting awhile; he did so, and in three days effected a bargain for $160 for the family, embracing six cabin passengers, (with servant,) and eight deck passengers, together with three horses, wagon and baggage; the deck passengers and horses to be found by the emigrant.

It may not be irreleverant to add that the family spoken of had come from a county in Maryland about three hundred miles from Wheeling. They traveled about twenty miles a day with a four horse wagon. Their expenses thus far was $75; price of oats on the road, forty-five to fifty cents. Had they continued on by land to St. Louis,

six hundred miles from here, it would have cost them $100 more. They would have got oats in Ohio for twenty and twenty-five cents, and in Indiana and Illinois for sixteen and eighteen cents. It would have taken them thirty days, however; while by water they will reach there in seven.

ALPHABETICAL LIST of Steamboats built and running on the western waters, with the date of building, tonnage, and expiration of service. The high *and* low *pressure engines are distinguished by the letters* h *or* l *in the first column.*

Names.		Where Built.	When built.	Tonn.	Date of loss.	How destroyed.
Ætna		Pittsburgh	1814	361	1822	Worn out.
Alabama		F. Stephens	1818	219	1824	Struck S. B. Natchez.
Alexandria		N. Orleans	1819	60	1823	Struck a drift log.
Arkansas		do.	1820	51		Snagged.
Allegheny	*h*	Pittsburgh	1818	50	1826	Worn out.
Ariel	*h*	Cincinnati	1825	80		Worn out.
America	*h*	Pittsburgh	1826	240	1827	Sunk.
American	*h*	do.	1824	50		Worn out.
AndrewJackson		Cincinnati	1823	299		Worn out.
Aurora	*h*	Steuben'lle	1825	150		Sunk.
Atalanta	*h*	Cincinnati	1826	148	1834	Worn out.
Amazon	*l*	do.	1826	300	1831	Sunk.
Attackapas	*h*	Louisville		124	1831	Burnt at New Orleans.
Atlas	*h*	N. Albany	1827	160		
Atlantic	*h*	Marietta	1829	400		
Amulet	*l*	Cincinnati	1829	150		
Allegheny	*h*	Pittsburgh	1830	40		
Abeona	*h*	do.	1830	150		
Argus	*h*	do.	1831	100	1834	Worn out.
Arab	*l*	Cincinnati	1831	150		
Assinaboine	*h*	do.	1832	150		
Albion	*h*	Browns'ille	1833	40		
Antelope	*h*	Pittsburgh	1831	90	1831	Sunk by ice.
Arkansaw	*h*	Cincinnati	1832	115		
Argo	*h*	Jefferson'le	1833	80		
AndrewJackson		Steuben'lle	1833	120		
Alert	*h*	Pittsburgh	1835	105		
Alice Maria	*h*	Cincinnati	1835	95		
Alpha	*h*	Rising Sun	1835	58		
Algonquin		Pittsburgh	1835	222		
Arabian		do.	1835	101		
Artist		Browns'ille	1834	108		
Adriatic		Cincinnati	1835	432		
Adventure		Pittsburgh	1835	50		
Anna Calhoun		Wheeling	1835	138		
Augusta		Cincinnati	1835	312		
Beaver		Louisville	1829	139		Worn out.
Balise				300	1826	Burnt.
Buffaloe		Pittsburgh	1816	250	1819	Worn out.
Belle Creole	*l*	Cincinnati	1823	122	1829	Snagged.
Bolivar	*h*	Pittsburgh	1825	130		Worn out.
Belvidere	*l*	Portsmo'th	1825	160	1831	Worn out.

Names.		Where Built.	When Built.	Tonn.	Date of loss.	How destroyed.
Blakely				250		
Ben. Franklin	*l*	Cincinnati	1826	165	1833	Abandoned.
Beaver	*l*	do.	1826	148	1827	
Baltimore	*h*	Pittsburgh	1828	73		
Beverly Chew						Name changed to Pilot.
Belfast	*h*	Cincinnati	1829	435		
Brandywine	*h*	do.	1828	500	1832	Burnt—aboveMemphis
Banner	*h*	Ripley	1830	90		Changed to Calavar.
Balise Packet		Pittsburgh	1819	50		
Boston	*h*	do	1831	157		
Bolivar	*h*	Grave Cr'k	1831	46		
Baltic	*h*	Pittsburgh	1831	407		
Bonita	*h*	Cincinnati	1832	140		
Black Hawk	*h*	N. Albany	1832	160		Changed to Heroine.
Bravo	*h*	Wheeling	1832	85		
Barrataria	*h*	Cincinnati	1832	100		
Bonnets of Blue	*h*	Cumb'land river	1832	186		
Black Hawk	*h*	Cincinnati	1832	160		
Bayou Sara	*h*	do.	1833	275		
Beaver	*h*	Beaver	1833	60		
Boone's Lick	*h*	Pittsburgh	1833	295		
Black Hawk		Cincinnati	1832	150		
Bunker Hill		N. Albany	1834	301		
Boone		do.	1834	110		[Lick.
Missouri Belle		Elizabeth'n	1834	164	1834	Sunk—By St. Boone's
Ben. Franklin		Cincinnati	1834	126		
Big Black		Pittsburgh	1835	81		
Comet	*h*	Cincinnati	1817	154	1823	Snagged.
Cincinnati		Cincinnati	1818	157		Snagged.
Car of Commerce	*h*	Pittsburgh	1819	221	1822	Worn out.
Columbus	*l*	N. Orleans	1819	450	1824	Worn out.
Calhoun	*h*	Ky. river	1819	130	1824	Worn out.
Cumberland	*h*	Pittsburgh	1819	246	1825	Worn out.
Columbia		Cincinnati	1826	220		Burnt.
Cherokee	*h*			125		Burnt.
Congress		Wheeling	1822	160		Worn out.
Courier	*l*	Louisville	1820	119		Worn out.
Cotton Plant				125		Lost at Mobile.
Columbus	*h*	Pittsburgh	1826	220		Sunk.
Caledonia	*h*	Cincinnati	1824	371		
Cavalier	*l*	do.	1825	180	1831	Worn out.
Clinton	*l*	do.	1825	132	1831	Worn out.
Caravan	*h*	do.	1825	220	1830	Worn out.
Columbia	*l*	do.	1825	200	1833	Snagged.

Names.		Where Built.	When Built.	Tonn.	Date of loss.	How destroyed.
Cotton Plant			1826			
Courtland		Cincinnati	1826	212		
Cincinnati	*h*	do.	1826	106		
Coosa	*h*	Marietta	1826	173	1831	Sunk by S. B. Huntress
Commerce	*h*	Pittsburgh	1826	180	1830	Worn out.
Crusader	*l*	Fred'ksb'g	1826	170	1830	Sunk.
Catawba	*h*	Silver creek	1826	170		
Chesapeake		Big Bone	1827			Never run.
Cleopatra	*h*	N. Albany	1826	150		
Criterion	*h*	do.	1828	200		
Cumberland	*h*	Pittsburgh	1828	100	1831	Sunk.
Car of Commerce	*h*	West Port	1827	150	1832	Sunk.
Citizen	*h*	Pittsburgh	1829	120		Sunk.
Constitution	*h*	Cincinnati	1829	300		
Cedar Branch	*h*					
Cora	*h*	Pittsburgh	1829	140		
Corsair	*h*	do.	1829	121		
Courier	*h*	Cincinnati	1830	100	1835	Worn out.
Chieftain	*h*	N. Albany	1830	120		
Cotton Plant	*h*	Cincinnati	1830	262	1832	Burnt at New Orleans.
Convoy	*h*	do.	1830	315		
Cincinnatian	*l*	do.	1830	236	1834	Worn out.
Colbert	*h*					
Carrolton	*h*	Pittsburgh	1831	186		
Columbus	*h*	do.		50		
Charleston	*h*	Big Sandy	1830	80		
Conveyance	*h*	Cincinnati	1831	90		
Companion	*h*	Ripley	1831	100		
Courier	*h*	Pittsburgh	1831	160	1834	Worn out.
Choctaw	*h*	do.	1831	136		
Chesapeake	*h*	Marietta	1831	154		
Chief Justice Marshall	*h*	Pittsburgh	1832	179		
Chattahoochee	*h*	Cincinnati	1832	100		
Caroline	*h*	Pittsburgh	1828	90	1834	Sunk.
Creole	*h*	Cumb'ld R.	1829	171		Worn out.
Chippewa	*h*	Steubenv'le	1832	140		
Caroline	*h*	N. Albany	1832	180		
Caspian	*h*	Cincinnati	1832	200		
Champlain	*h*	Augusta	1832	108	1834	Sunk, below St. Louis.
Chester	*h*	Pittsburgh	1832			
Charleston	*h*	Cincinnati	1831			
Carolton	*h*	Beaver	1830			
Cavalier	*h*	Ripley	1832			
Chickasaw	*h*	Pittsburgh	1832			

Names.		Where Built.	When Built.	Tonn.	Date of loss.	How destroyed.
Cayuga	*h*	Pittsburgh	1833			
Clinton	*h*	Wheeling	1828			Worn out.
Chancellor	*h*	Shauset'wn	1832			
Compromise	*h*	Louisville	1832			
Champion	*h*	Bridgeport	1833			
Carol	*h*	Portsmo' th	1832			
Ceres	*h*	Browns'ille	1833			
Citizen	*h*	Richmond	1833		1834	Sunk.
Caledonia	*h*	Ripley	1833			
Choctaw	*h*	Pittsburgh	1833	120		
Consort	*h*	Browns'ille	1832	130	1832	Sunk.
Courtland	*h*	Cincinnati	1826	200	1833	Sunk.
Cumberland	*h*	Pittsburgh	1827	120		Worn out.
Commerce	*h*	do.	1834	170		
Cygnet	*h*	Cincinnati	1834	77		
Chickasaw	*h*	do.	1834	152		
Claiborne	*h*	Pittsburgh	1834	327		
Despatch		Browns'ille	1817	75	1820	Worn out.
Dolphin	*h*	Pittsburgh	1819	146	1834	Worn out.
DeWittClint'n	*h*	do.	1826	200	1830	Worn out.
Decatur	*h*	Browns'ille	1826	113		Sunk.
Diana	*h*	Brush Ck.	1828	100	1833	Sunk.
Delaware	*h*	Pittsburgh	1828	100	1832	Sunk; rais'd; aband'nd.
Dolphin	*h*	Aurora	1826	90		Destroyed.
Don Juan	*l*	Louisville	1831	100		
Dolphin	*h*	Portsmo' th	1830	112	1832	Burnt, below Wheeling
Dove	*h*	Pittsburgh	1831	100		
Dan'l Webster	*h*	Cincinnati	1829	80	1834	Worn out.
Delphine	*h*	do.	1832	137	1833	Burnt.
Dover	*h*	Cumb'ld R.	1832	200		
D. O'Connell	*h*	N. Albany	1833	200		[Mississippi.
Daniel Boone		do.	1826	264	1832	Sunk; Canadian Reach,
Don Pedro						Changed to Leonidas.
Denmark		Wheeling	1834	75		
Despatch		Pittsburgh	1832	338		
Detroit		do.	1835	137		
Dover		do.	1835	80		
Dan'l Webster		Jefferson'le	1835	389		
Dayton		Pittsburgh	1835	118		
Enterprise		Browns'ille	1814	75	1817	Worn out.
Exchange		Louisville	1818	214	1824	Worn out.
Elizabeth		do.	1817	243		Worn out.
Expedition		Pittsburgh	1818	120		
Expedition		Wheeling	1819	235	1824	Worn out.
Eagle		Cincinnati	1818	118		Snagged, above N. O.
Eclipse	*h*	Pittsburgh	1823	120		Sunk.

Names.		Where Built.	When Built.	Tonn.	Date of loss.	How destroyed.
Eliza	*h*	Cincinnati	1821	65		Worn out.
Emerald	*h*	Cumb'ld R.	1824	150	1830	Worn out.
Echo	*h*	Pittsburgh	1826	150		Worn out.
Erie	*h*	do.	1826	125		Worn out. [Chain.
Essex	*h*	do.	1827	135	1829	Broke in two, on Great
Emigrant	*h*	Cincinnati	1829	76	1832	Sunk by ice.
Experiment	*h*	Browns'ille	1830	85		
Enterprise	*k*	Pittsburgh	1830	150		
Eagle	*h*	do.	1830	40		
Express	*h*	Cincinnati	1831	105		
Exchange	*h*	Louisville	1830	32		Abandoned.
Enterprise	*h*	Shoustown	1830	111	1832	Snagged.
Envoy	*h*	Cincinnati	1831	96		
Elk	*h*	Browns'ille	1829	60	1833	Abandoned.
Emigrant	*h*	Cincinnati	1832	90	1832	Lost by ice.
Erin	*h*	Covington	1833	100		
Erie	*h*	Browns'ille	1827	52		Worn out.
Eclipse	*h*	Marietta	1832	60		
El'n Douglass	*h*	N. Albany	1833	266		
Exchange		Cookstown	1835	68		[vieve.
Franklin		Pittsburgh	1817	150	1822	Snagged, near St. Gen-
Frankfort		Ky. River	1818	250	1822	Worn out.
Fayette	*h*	Louisville	1819	314		Worn out.
Fidelity	*l*	New York	1821	150		Destroyed.
Florence		Clarksville	1822	60		Destroyed.
Fire Fly		Louisville		19		Destroyed.
Florida	*l*	Pittsburgh	1826	278		Destroyed.
Fort Adams				125		Burnt.
Floridn	*l*	Cincinnati	1826	250		Burnt, on Mobile river.
Feliciana	*h*	Philadelpha	1820	408		Still running.
Favorite	*h*	Pittsburgh	1822	260		Worn out.
Florence	*h*	Silver Cr'k.	1822	60		Worn out.
Fanny	*l*	New York	1823	120	1827	Went back to N. York.
Friendship	*h*	Pittsburgh	1825	200		Worn out.
Fame	*h*	do.	1826	170	1830	Worn out.
Facility	*l*	Cincinnati	1827	117		Worn out.
Fairy	*l*	do.	1827	80	1831	Sunk.
Forrester	*h*	Browns'ille	1827	100	1833	Burnt, on Cumberland.
Farmer	*l*	Cincinnati	1831	277		
Freedom	*h*	Wheeling	1831	135		
Favorite	*h*	Nashville	1831	155	1832	Sunk, robbed & burnt.
Friend	*h*	Cincinnati	1831	118		
Falcon	*h*	do.	1832	91	1833	Sunk by S. B. Senator.
Fairy Queen	*h*	Brush Ck.	1832	66		
Friendship	*h*	Cincinnati	1833	100		
Free Trader	*h*	Pittsburgh	1832	109		

Names.		Where Built.	When Built.	Tonn.	Date of loss.	How destroyed.
Fame	*h*	Pittsburgh	1832	132		
Farmer	*h*	do.	1833	277		
Flora	*h*	do.	1835	119		
Geo. Madison	*h*	do.	1817	150	1822	Worn out.
Gen. Jackson	*h*	do.	1817	150	1822	Snagged, on Cumberland.
Gen. Pike	*h*	Cincinnati	1818	180	1823	Worn out.
Gen. Clarke	*h*	Louisville	1818	200	1822	Worn out.
Gov. Shelby	*l*	do.	1819	106	1822	Worn out.
Gen. Harrison		do.	1819		1823	Destroyed.
Gen. Greene	*l*	Cincinnati	1820	306	1823	Snagged, on Cumberland.
Gen. Robinson	*h*	Newport	1819	238	1823	do. near N. Madrid.
Grecian	*h*	Louisville	1824	160	1826	Burnt at New Orleans.
Gen. Pike	*h*	Big Bone	1824	150		Worn out.
Geo. Washington	*h*	Cincinnati	1825	360		
Gen. Brown	*h*	Pittsburgh	1825	180		Burnt at Mobile.
Gen. Scott	*h*	Beaver	1825	220		
Gen. Wayne	*h*	Pittsburgh	1825	350	1829	Worn out.
Gen. Carroll	*h*	Cincinnati	1826	272	1829	Sunk by S. B. Diana.
Gen. Hamilton	*h*	do.	1826	158	1829	Worn out.
Gen. Marion	*h*	do.	1826	88		
Gen. Coffee	*h*	Pittsburgh	1826	200		
Galena & St. Louis Packet	*h*	N. Albany	1826	150		Worn out.
Grampus	*h*	Cincinnati	1827	200		
Galena	*h*	do.	1829	110		Changed to Hawk Eye.
Globe	*h*	St. Louis	1829	150		Aban'd up the Miss.
Gen. Neville	*h*	Pittsburgh	1822	150		Worn out.
Gondola	*h*	do.	1830	120	1832	
Gleaner	*h*	do.	1830	100		Sunk by unloading.
Guyandot	*h*	Cincinnati	1831	91		
Gondolier	*h*	Nashville	1831	110		Changed to Rambler.
Gallipolis	*h*	Gallipolis	1832	100		
Gazelle	*h*	Pittsburgh	1832	130		
Grenadier	*h*	Bridgeport	1832	150		
Galenian		Pittsburgh	1834	130		
Gladiator		Cincinnati	1834	120		
General Pike		do.	1835	151		Mail boat.
Gen. Sumpter		do.	1835	188		
Gov. Clarke		Louisville	1835	149		
George Collier						
Hecla		Cincinnati	1818	120	1823	Worn out.
Henderson		do.	1818	124	1823	Worn out.
Hero		Steuben'lle	1819	120	1822	Struck a rock near Golconda; sunk
Henry Clay	*l*	Licking R.	1819	150	1826	Destroyed on Mobile R
Hornet		Brandenb'g	182	118		Lost at Mobile.

Names.		Where Built.	When Built.	Tonn.	Date of loss.	How destroyed.
Hope		Louisville	1821	75	1825	Sunk, near Bayou Sara.
Hercules	h	Cincinnati	1826	275	1828	Sunk.
High'd Laddie	h	do.	1824	80		Destroyed.
Herald	h	Pittsburgh	1824	150		Destroyed.
Hel. M'Gregor	h	Cincinnati	1825	340	1831	Destroyed at Mobile.
Hercules	h	Pittsburgh	1826	165	1831	Worn out.
Hibernia	h	N. Albany	1826	200	1834	Worn out.
Huntress	h	do.	1826	300		
Huntsville	h	Pittsburgh	1829	350		
Huron	h	do.	1829	230		Snagg'd, above Natchez
Home	h	do.	1829	120	1831	Burnt, at Beaver.
Huntsman	h	do.	1829	150		
Highlander	h	Browns'ille	1829	120		
Herald	h	Marietta	1829	120		
Hope	h	Zanesville	1828	60		
Hudson	h	Pittsburgh	1829	346		
Hatchie	h	do.	1830	100		
Herald	h	do.	1831	200	1835	Worn out.
Harry Hill	h	Cumb'ld R.	1832	161		
Homer	h	N. Albany	1832	500		
Halcyon	h	Browns'ille	1832	121		
Helen Mar	h	Cincinnati	1832	89		
Henry Clay	h	Pittsburgh	1831	425		
Hawk Eye	h	Cincinnati	1829	120		Formerly the Galena.
Heroine	h	Bridgeport	1832	96		
Heroine	h	N. Albany	1832	160		
Huntsville	h	Shaustown	1829	339		
Huntress	h	Pittsburgh	1834	97		
Hunter	h	do.	1834	110		
Independence		do.	1818	50		
Independence		Salt river	1818	100	1821	Worn out.
Indiana	h	N. Albany	1822	180	1829	Worn out.
Illinois	h	Pittsburgh	1826	130	1828	Snagged.
Integrity	h	Cincinnati	1827	100		
Isabella	h	Marietta	1827	250		
Industry	h	Pittsburgh	1829	80		Name changed to Elk.
Illinois	h	Jefferson'le	1831	110		
Ivanhoe		Pittsburgh	1834	197		
Indian		Cincinnati	1834	70		
Indiana		do. [town	1834	70		
Iowa		Elizabeth-	1834	144		
Iberia		Cincinnati	1834	156		
James Monroe	h	Pittsburgh	1816	150	1821	Sunk, below Red River
Johnston	h	Wheeling	1818	140	1822	Worn out. [Louis.
James Ross	h	Pittsburgh	1818	270	1823	Stove by ice, at St.
Jubilee	h	do.	1826	205		Worn out.

Names.		Where Built.	When Built.	Tonn.	Date of loss.	How destroyed.
Josephine	*h*	Cincinnati	1826	50		Worn out.
James O'Hara	*h*	Pittsburgh	1828	200		
July 4th	*h*	N. Albany	1831	100	1831	Sunk, above Wheeling.
Juniata	*h*	Pittsburgh	1832	118		
Junius	*h*	Elizabeth'n	1832	129		
Jefferson	*h*	Wheeling	1832	156		
Jefferson	*h*	Nashville	1832	100	1834	Sunk.
Java	*h*	Marietta	1830	103		
James Monroe	*h*	Cincinnati	1831	170		
John Nelson	*h*	Pittsburgh	1833	156		
Jack Downing	*h*	Gallipolis	1833	123		
Josephine	*h*	Marietta	1834	90	1834	Sunk, below St. Louis
John Hancock		Brush Ck.	1835	95		
Kentucky		Ky. River	1818	112	1821	Worn out
Kanawha	*h*	Cincinnati	1828	60		Sunk.
Kentuckian	*h*	Pittsburgh	1829	255		
Knoxville	*h*	Cincinnati	1831	120		
Kitty Clover	*h*	Wheeling	1829	60		Abandoned.
Kentuckian		Pittsburgh	1829	331		[Chacot.
Leopard		Louisville	1820	60	1825	Snagged, near Point
Louisiana	*l*	N. Orleans	1818	103		Worn out.
Lafayette	*h*	Pittsburgh	1825	150		Worn out.
Liberator	*h*	do.	1826	200		Worn out.
Louisville	*h*	Louisville	1823	60	1827	Worn out.
Laurence	*h*	Cincinnati	1824	122	1829	Worn out.
Lexington	*h*	Frankfort	1825	250	1834	Worn out.
Liberator	*h*	Pittsburgh	1826	200		Worn out.
Lady Washington	*h*	do.	1826	147	1832	Sunk by ice.
Lady of the Lake	*h*	N. Albany	1826	170	1832	[land. Snagg d, at Wolf Is-
Lady Washington	*h*	Silver Ck.	1826	360	1832	Lost by ice.
Livingston	*h*	Smithland	1826	200		Worn out.
La Grange	*h*	Wheeling	1828	135	1832	Abandoned.
Lady Lafayette				65		
Lady Franklin	*h*	Portsmo'th	1829	200	1835	Sunk by collision.
La Fourche	*h*	N. Albany	1829	200		
Lark	*h*	Pittsburgh		100		Name chang'd to Uncas
Louisiana	*h*	Cincinnati	1830	307		
Laurel	*h*					
Lady Byron	*h*	Steuben'lle	1830	100	1832	
Louisville	*h*	Pittsburgh	1831	327	1833	Lost, striking a stump.
Lioness	*h*	N. Albany	1832	175		Lost, by explosion of
Little Rock	*h*	Jefferson'le	1832	100		[powder.
Lady Madison	*h*	Bridgeport	1832	130		

Names.		Where Built.	When Built.	Tonn.	Date of loss.	How destroyed.
Lady Jackson	*h*	Nashville	1832	120		
Lady Washington	*h*	Marietta	1832	100		
Lancaster	*h*	near Pitt'h	1832	135		
Lafayette	*h*	Cincinnati	1833	84	1833	Burnt, mouth of Ohio.
Leonidas	*h*	do.	1833	125		
Logan	*h*	do.	1834	85		
Le Flore	*h*	do.	1834	115		
Lady Boone		Wheeling	1834	40		
Lady Scott		Maysville	1834	70		
Lady Marshall		Cincinnati	1834	120		
Lewis Cass		do.	1835	122		
Levant		do.	1835	288		
Maid of Orleans	*l*	Philad.	1818	193		Destroyed.
Maysville	*h*	Maysville	1818	209	1824	Worn out.
Manhattan	*l*	New York	1819	427	1825	Worn out.
Mississippi	*l*	Mobile	1819	380	1825	Worn out.
Mandan		Louisville	1819	150	1825	Snagged, above N. O.
Missouri	*h*	Newport	1819	177	1826	Snagged.
Mars	*h*	Wheeling	1819	55	1822	Snagged, above N. O.
Mo. Packet		Louisville	1819	60	1820	Snagged, on the Mo.
Mobile		N. Orleans	1820	145		
Magnet	*l*	Louisville	1822	140	1827	Worn out.
Miami	*h*	Cincinnati	1822	100	1828	Sunk.
Mechanic	*h*	Marietta	1823	120	1827	Stove, near St. Louis.
Mexico	*h*	Cincinnati	1823	120	1827	Worn out.
Muskingum	*h*	Marietta	1825	150	1829	Snagged, on Red River
Montezuma	*l*	Cincinnati	1827	200	1829	Snagged, near Helena.
Marietta	*h*	Marietta	1825	150		
Messenger	*h*	Pittsburgh	1826	160	1830	Worn out.
Maryland	*h*	do.	1827	160		[ester.
Monongahela	*h*	Browns'ille	1827	100		Name changed to For-
Missouri	*h*	Pittsburgh	1828	150		
Mountaineer	*h*	Browns'ille	1825	175	1832	Abandoned.
Montgomery	*l*	Cumb'ld R.	1828	140	1829	Sunk.
Mohican	*h*	Pittsburgh	1829	350		
Monticello	*h*	do.	1829	140	1833	Sunk, in Bayou Plaq'e
Magnolia	*l*	Cincinnati	1830	100		
Minerva	*h*		1830			
Mobile	*h*	Pittsburgh	1830	150	1831	Burnt. [burgh.
Mercury	*h*	Steuben'lle	1819	15		Struck by S. B. Pitts-
Messenger	*h*	Ripley	1831	100		
Memphis	*h*	Nashville	1831	380		
Michigan	*h*	Beaver	1831	338		
Mohawk	*h*	Pittsburgh	1831	555		
Mt. Vernon	*h*	Cincinnati	1832	90		

Names.	Where Built.	When Built.	Tonn.	Date of loss.	How destroyed.
Metamora *h*	Louisville	1832			
Mediterranean *h*	Pittsburgh	1832	600		Largest boat.
Missourian *h*	do.	1832	215	1832	Cabin burnt off.
Mobile Farmer *h*	do.	1832	214		
Mountaineer *h*	Bridgeport	1832	188		
Miner *h*	Pittsburgh	1833	70		
Madison *h*	Wheeling	1828	50		
Majestic	Pittsburgh	1834	323		
Missouri Belle	Elizab'to 'n	1834	164		
Mogul	Pittsburgh	1834	414		
Minerva	do.	1834	87		
Marion	Fredonia	1835	140		
Mazeppa	Louisville	1834	135		
Monroe	Wheeling	1835	90		
Mt. Pleasant	do.	1835	94		
Madison	Pittsburgh	1835	322		
Marion	do.	1835	109		
Natchez					
New Orleans	Pittsburgh	1815	350	1818	Sunk near B. Rouge.
Napoleon	Louisville	1817	316	1822	Worn out.
Nashville	Cincinnati	1822	200	1826	Snagged, above N. O.
NashvillePack't	do.	1827	125	1831	Worn out.
Natchitoches	do.	1826			Worn out.
Neptune	N. Orleans	1821	58		Worn out.
Natchez *l*	New York	1822	240	1829	Snagg'd,below Natchez
New York *h*	Pittsburgh	1826	310	1832	Snagg'd near Plumb Pt
Native *l*	Cincinnati	1827	100		Snagged.
Neptune *h*	Pittsburgh	1828	200		Snagged, mouthof O.
N. America *h*	do.	1828	300		Abandoned.
Nashville *h*	Cincinnati	1828	398		
Niagara *h*	Steuben'lle	1829	150		
Nile *h*	Pittsburgh	1829	130		
New Jersey *h*	do.	1830	150	1832	Sunk by ice.
New Pennsy'a *h*	do.	1827	140		
Napoleon *h*	do.	1831	160		
N. Alabama *h*	Cincinnati	1831	365		
N. Brunswick *h*	Pittsburgh	1832	200	1833	Burnt, above Vicksb'g
Nimrod *h*		1832			
Navarino *h*	Gallipolis	1832	147		
Neptune *h*	Jefferson'le	1832	140		
NewEmigrant *h*	Cincinnati	1832	90		
Native	Bridgeport	1834	52		
NewCompanion	Browns'lle	1834	134		
Navigator	Bridgeoprt	1834	85		
New York	Cincinnati	1835	134		
Neosho	do.	1834	88		

Names.		Where Built.	When Built.	Tonn.	Date of loss.	How destroyed.
Orleans		Pittsburgh	1811	400	1813	Snagg'd, near B. Rouge
Ohio	*h*	N. Albany	1817	364	1819	Worn out.
Olive Branch	*h*	Pittsburgh	1819	313		Worn out.
Osage		Cincinnati	1820	149	1823	Sunk.
Ohio	*h*	Portsmo'th	1824	180	1828	Destroyed.
Opelousas	*h*	Cincinnati	1826	133		Worn out.
Ontario	*h*	Silver Ck.	1826	106		Worn out.
Oregon	*h*	Marietta	1827	225	1832	Sunk, at Plumb Point.
Oliver H. Perry		Cincinnati	1829	100		Name changed to Dan.
Ohio	*h*	Pittsburgh	1831	288		[Webster.
Olive	*h*	do.	1830	100		Changed to West'n Va.
Odd Fellow	*h*	Elizabeth'n	1830			Changed to Traveler.
Orleans	*h*	N. Albany	1831	326		
Otto	*h*	Jefferson'le	1831	163		
Osage	*h*	Morgant'n	1832	90		
Orion	*h*	Marietta	1832			
Ophelia	*h*	Cincinnati	1832	110		
O'Connell	*h*	Pittsburgh	1833	107		
Olive Branch	*h*	Elizabeth'n	1833	76		
Ouachita	*h*	Cincinnati	1833	162		
Ohioan	*h*	Pittsburgh	1833	104		
Otsego		Evansville	1835	95		
Providence	*l*	Ky. River	1818	450	1824	Snagged, above N. O.
Post Boy	*h*	Louisville	1818	231	1824	Worn out.
Perseverance		Cincinnati	1818	50	1820	Burnt, near Madison.
Paragon	*l*	do.	1819	355	1828	Worn out. [isville.
President	*h*	Pittsburgh	1824	300		Run ashore, below Lou-
Phœnix	*h*	do.	1823	200	1828	Worn out.
Pit'h & St. Louis Pkt.	*h*	do.	1823	131	1827	Burnt.
Pittsburgh	*h*	do.	1823	133		Worn out.
Pennsylvania	*h*	do.	1823	107	1827	Worn out. [Louis.
Pilot	*l*	Big Bone	1825	150		Snagged, below Saint
Paul Pry	*h*			60		Sunk, on Red River.
Plough Boy	*h*	Frankfort	1824	120		
Patriot	*h*	Cincinnati	1825	258	1831	Worn out.
Pioneer	*h*	do.	1825	200	1830	Worn out.
Phœbus	*h*	do.	1825	80		
Planter	*l*	do.	1825	130		
Paul Jones	*h*	Beaver	1825	300	1831	Worn out.
Post Boy	*l*	New York	1825	250		
Pocahontas	*h*	Pittsburgh	1825	260		
Philadelphia	*l*	Cincinnati	1826	445	1834	Worn out.
Pocahontas	*h*	Pittsburgh	1826	260		
Pilot	*h*	New York	1827	240		
Potomac	*h*	Pittsburgh	1828	80	1833	Abandoned.

Names.		Where Built.	When Built.	Tonn.	Date of loss.	How destroyed.
Porpoise	*h*	Cincinnati	1828	326		[Fourche.
Phœnix	*h*	Pittsburgh	1828	250	1832	Burnt, near Bayou La
Powhattan	*h*	do.	1828	221		
Plaquemine	*h*	do.	1828	65		
Pennsylvania	*h*	do.	1827	150	1833	Abandoned.
Plaquemine	*h*	do.	1829	100		
Planet	*h*	Cincinnati	1829	100		
Packet	*h*	Pittsburgh	1829	90		
Pacific	*h*	Cincinnati	1829	387		
Paragon	*h*	do.	1829	90		
Pearl	*h*	do.		69		
Peruvian	*h*	Pittsburgh	1830	400	1833	Snagg'd below Natchez
Pittsburgh	*h*	do.	1831	100	1832	Lost by ice.
Polander	*h*	Browns'ille				
Planter	*h*	Pittsburgh	1831	116		
Portsmouth	*h*	Cincinnati	1832	95	1833	Sunk in Wabash.
President	*h*	Cumb'ld R.	1831	360		[sourian.
Paul Clifford	*h*	Cincinnati	1831	100		Struck by S. B. Mis-
Peoria	*h*	Elizabeth'n	1832	78		
Planter	*h*	Pittsburgh	1833	107		
Post Boy	*h*	Steuben' lle	1833	44		
Privateer	*h*	Pittsburgh	1833	149		
Plough Boy	*h*	Louisville	1833	80		
Protector	*h*	Pittsburgh	1834	156	1834	Burnt.
Paul Jones	*h*	Cincinnati	1834	170		
Princeton	*h*	Rockville	1834	133		
Potosi	*h*	Pittsburgh	1834	121		
Plough Boy	*h*	do.	1834	142		
Ponchartrain		N. Albany	1834	145		
Patrick Henry		Cincinnati	1835	115		
Pawnee		Pittsburgh	1835	198		
Philadelphia		Marietta	1835	115		
Pioneer		Pittsburgh	1835	112		
Rifleman		Louisville	1818	231	1824	Burnt at Mobile.
Rapide	*h*	Pittsburgh	1819	189	1822	Burnt.
Robert Fulton	*l*	New York	1820	500		Worn out.
Rocket		Louisville	1820	75	1821	Worn out. [cot.
Rufus Putnam	*h*	Marietta	1822	60	1826	Snagged near Port Chi-
Robert Burns	*h*	Cincinnati	1825	125	1828	Burnt.
Rob Roy	*h*	do.	1823	240	1829	Worn out.
Rambler	*h*	Pittsburgh	1823	120		
Red River	*l*	Marietta	1824	180		Worn out.
Robert Emmet	*h*	Louisville	1825	40		
Red River Pkt	*h*	Cincinnati	1826	120		Worn out.
Reindeer	*h*	Browns'ille	1826	60		Worn out.
Republican	*h*	Cincinnati	1826	50		

Names.		Where Built.	When Built.	Tonn.	Date of loss.	How destroyed.
Rover	*h*	Cincinnati	1827	100	1830	Worn out.
Rising Sun		Rising Sun		100		
Robt. Fulton	*l*	Cincinnati	1828	128	1834	Worn out.
Red Rover	*h*	Pittsburgh	1828	50		Worn out.
Red Rover	*h*	do.	1829	500		Worn out.
Ruhama	*h*	do.	1829	70		
Reaper	*h*	Cincinnati	1831	130	1832	Sunk, below Natchez.
Reindeer	*h*	Browns'ille	1830	100	1833	Burnt, at New Albany.
Rambler	*h*	Cincinnati	1831	93	1833	Burnt, at Louisville.
Return	*h*	near Pitts'h	1832	127	1833	Sunk by ice.
Rapide	*h*	N. Albany	1830	160		
Rising Sun	*h*	Lawrenc'h	1832	40	1833	Sunk, Tennessee River
Richmond	*h*	N. Richm'd	1833	40		
Rambler	*h*	Nashville	1831	100		
Randolph	*h*	N. Albany	1833	500		
Reliance	*h*	Browns'ille	1833	95		
Revenue	*h*	Louisville	1833	130		
Reindeer, 3d	*h*	Browns'ille	1834	104		
Rob Roy	*h*	Jefferson'le	1834	192		
Rufus Putnam	*h*	Marietta	1835	98		
Roanoke	*h*	Wheeling	1835	100		
Robert Emmet		do.	1835	104		
Robert Morris		Pittsburgh	1835	128		
Rover		do.	1835	65		
Saint Louis	*h*	do.	1818	250	1821	Burnt, near N. Madrid.
Speedwell	*h*	Big Bone	1827	80	1828	Snagg'd, below Wheel'g
St. Louis Pkt.	*h*	N. Albany	1826	150		
Shamrock	*h*	Pittsburgh	1827	125		Worn out.
Shepardess	*h*	Economy	1827	140	1831	Worn out.
St. Mary	*h*	Nashville	1828			
St. John	*h*	Cincinnati	1828	100	1832	Sunk. [ger.
Star	*h*	Pittsburgh	1828	120		Name chang'd to Stran-
Souvenir	*h*	N. Albany	1828	140		
Seventy-Six	*h*	Cincinnati	1829	200	1833	Sunk, striking a stump
St. Louis	*h*	do.	1829	145	1834	Snagged, in Gr'd Gulf.
Sylph	*h*	do.	1829	70		
Saratoga	*l*	do.	1829	140	1832	Burnt, at New Orleans.
Stranger	*h*	Pittsburgh	1828	100	1832	Worn out.
Shark, Tow B.	*h*	Cincinnati	1829	315		
Superior	*h*	Steuben'lle	1823	70		
Sciota	*h*	Gallipolis	1822	170	1828	Worn out.
Swallow						
Sam Patch		Pittsburgh	1830	50		
Shoalwater					1831	Sunk.
Scout	*h*	Pittsburgh	1831		1833	Abandoned.
Samson	*h*	Cincinnati	1831	211		

Names.		Where Built.	When Built.	Tonn.	Date of loss.	How destroyed.
Signal	*l*	Cincinnati	1831	150		
Senator	*l*	Portsmo' th	1831	183		
Statesman	*h*	Browns'ille	1831	136		
Scotland	*h*	N. Albany	1831	185	1835	Worn out.
Sentinel	*h*	Browns'ille	1831	145	1833	Burnt, at Louisville.
Sangamon	*h*	Pittsburgh	1832	90		
Splendid	*h*	Cincinnati	1832	400		
Star of the W.	*h*	do.	1830	150	1835	Worn out.
Spy	*h*	Fred'kst'n	1832	53	1833	Snagged, in Arkansas.
St. Martin	*h*	N. Albany	1832	160	1833	Burnt, near Donald-
Superior	*h*	Cincinnati	1832	174		[sonville.
Sea Gull	*h*	Warren	1833	40		
Shamrock	*h*	Portland	1831	230	1832	Sunk, by S. B. Baltic.
St. Landry	*h*	do.	1832	150		
Sun						
St. Leon	*h*	Jefferson'le	1833	80		
Science		Fredk'town	1834	70		
Southron		Steuben'ille	1834	149		
Siam		Pittsburgh	1835	128		
Swiss Boy		Cincinnati	1835	156		
Selma		Pittsburgh	1835	355		
South Alabama		Elizabeth'n	1835	165		
Southerner		Cincinnati	1835	320		
Tamerlane		Pittsburgh	1818	307	1824	Worn out.
Th. Jefferson	*h*	do.	1818	250	1822	Worn out.
Teche	*l*	N. Orleans	1818	296	1825	Burnt, below Natchez.
Telegraph		Louisville	1818	60	1819	Snagged, Isl. 21, Miss.
Telegraph		Pittsburgh	1819	160	1820	Burnt, near Pt. Chicot.
Tennessee	*l*	Cincinnati	1819	416	1823	Snagged, above Natch.
Telegraph			1821	160		Snagged, Cumb'ld R.
Tecumseh	*h*	Cincinnati	1826	212	1830	Worn out.
Tuscumbia	*h*	do.	1826	210		
Triton	*h*	do.	1826	50		
Talisman	*h*	Pittsburgh	1828	150	1832	Burnt, at St. Louis.
Traveler	*h*	Wheeling	1828	50	1832	Sunk, at St. Louis.
Talma	*h*	Pittsburgh	1829	140	1833	Worn out.
Tennessean	*h*	Cincinnati	1829	250		
Trenton	*h*	Pittsburgh	1829	150	1833	Snagged.
Tigress	*l*	Cincinnati	1828	200	1830	Burnt, at Rockport.
Tour	*h*	do.	1829	180		
Tallyho	*h*	Pittsburgh	1829	150		
Tippecanoe	*h*	Cincinnati	1830	150		[leans.
Telegraph	*l*	do.	1829	189	1833	Sunk, by S. B. N. Or-
Tariff	*h*	Pittsburgh	1829	30		
Tricolor	*h*	Portsmo' th	1831	130		Burnt, below Wheeling
Th. Yeatman	*h*	Cincinnati	1830	115		

Names.		Where Built.	When Built.	Tonn.	Date of loss.	How destroyed.
Tobacco Plant	*h*	Nashville	1831	300		
Tange peho	*h*	Cincinnati	1832	90		
Transport	*h*	Pittsburgh	1832	125		
Tuscarora	*h*	Cincinnati	1833	286		
Two Friends	*h*	Jefferson'le	1833	130		
Tom Bowline	*h*	Portland	1833	100		
Tiskilwa	*h*	Kenawa	1834	100		
Tuscahoma	*h*					
Tuscumbia	*h*	Marietta	1835	82		
Tempest	*h*	Pittsburgh	1835	112		
Teche	*h*	Cincinnati	1835	152		
Tuskina	*h*	Pittsburgh	1835	268		
United States	*l*	Jefferson'le	1819	644	1824	
Uncle Sam	*h*	Pittsburgh	1829	500	1835	Worn out.
Uncas	*h*		1830	90		Name changed to Columbus.
Union	*h*	Williamp't	1831	134		
Utility	*h*	Louisville	1831	59		and re-built.
Vesuvius		Pittsburgh	1814	390	1821	Worn out. Burnt, 1816,
Vesta		Cincinnati	1816	100	1821	Worn out.
Volcano	*h*	N. Albany	1818	217	1822	Worn out.
Virginia	*h*	Wheeling	1819	150	1822	Snagged, near St. Genevieve.
Vulcan	*h*	Cincinnati	1819	258	1824	Worn out.
Velocipede	*l*	Louisville	1819	100	1824	Worn out.
Velocipede	*l*	Cincinnati	1824	109		
Virginia	*l*	do.	1826	122		
Victory	*h*	Pittsburgh	1829	100	1832	Sunk.
Virginian	*h*	Cincinnati	1829	90		
Venture						
Volunteer		Steuben'lle				Sunk.
Volant	*h*	Cincinnati	1830	80	1833	Burnt.
Vermillion	*h*	do.	1830	130		
Versailles	*h*	do.	1831	80		
Vincennes	*h*	Vincennes	1832	100		
Veteran	*h*	M'n co. Ky.	1833	86		
Van Buren	*h*	Pittsburgh	1833	90		
Velocipede	*h*	Cincinnati	1832	120		
Washington	*h*	Wheeling	1815	212	1822	Worn out.
West Engineer		Pittsburgh	1819	30	1822	Worn out.
Wheeling Pkt.		Wheeling	1819	100	1823	Worn out.
William Penn		Pittsburgh	1825	150	1828	Snagged.
William Tell	*h*	N. Richm'd	1826	90	1829	Worn out.
Warrior	*h*	Marietta	1826	150		
Walk in Water		N. York	1826	425		
W. D. Duncan	*h*	Pittsburgh	1827	100		Worn out.
Waverly	*l*	Cincinnati	1828	100		
Walter Scott	*h*	do.	1829	200		

Names.		Where Built.	When Built.	Tonn.	Date of loss.	How destroyed.
Whig	h	Cincinnati	1830	80	1831	Sunk by ice.
W. Virginian	h	Wheeling	1829	90	1831	Sunk by ice.
Watchman	h	Browns'ille	1830	129		
Wanderer	h	N. Albany	1830	186		
Wm Wallace	h	Portland	1831	90		
Winnebago	h	Beaver	1830	85		
Woodsman	h	Pittsburgh	1831			
Whale, Tow B.	h	Marietta	1832	315		[Ponchartrain.
W. T. Barry	h	Cincinnati	1832	155		Destroyed on Lake
Warrior	h	Pittsburgh	1832	110		
Water Witch	h	Nashville	1831	120	1833	Sunk near Plaquemine.
Wm. Parsons	h	Ripley	1831	116		
Wyoming	h	Augusta	1832	105		
Warsaw	h	Wheeling	1832	146		
Wabash	h	N. Albany	1827	130		
Waterloo	h	Jefferson'le	1833	100		
Wm. Penn	h	Beaver	1833	88		
Warren	h	Cincinnati	1833	300		
Workey	h	do.	1831	118		Changed to Friend.
Washington		Bridgeport	1834	145		
Wacousta		Steuben'lle	1834	107		
Woodsman		Pittsburgh	1832	98		
Wave		Cincinnati	1835	94		

Comparative view of the number of Steamboats built at different places.

Pittsburgh,	173	Newport,	2
Cincinnati,	164	Frankfort,	2
Louisville,	33	New Richmond,	2
New Albany,	32	St. Louis,	1
Brownsville,	22	Grave Creek,	1
Wheeling	19	Big Sandy,	1
Marietta,	18	Augusta,	1
Steubenville,	12	Richmond,	1
Jeffersonville,	10	Aurora,	1
Nashville,	8	Clarksville,	1
Portsmouth,	7	Licking River,	1
Cumberland River,	7	Zanesville,	1
Beaver,	7	Salt River,	1
Ripley,	6	Smithland,	1
Elizabethtown,	6	Maysville,	1
Bridgeport,	6	Morgantown,	1
New Orleans,	5	Rockville,	1
Silver Creek,	5	Lawrenceburgh,	1
Shousetown,	4	Rising Sun,	1
Portland,	4	Warren,	1
Fredericksburgh,	3	Economy,	1
Big Bone,	3	Kenawa,	1
Kentucky River,	3	Williamsport,	1
Gallipolis,	3		
Brush Creek,	2		588

The proportions of the above to the several States in which Steamboats are built for the Western waters, are nearly as follows:

Ohio,	226	Virginia,	22
Pennsylvania,	216	Tennessee,	14
Kentucky,	56	Other places,	7
Indiana,	47		588

CHAPTER IX.

Western steamboats—subject continued down to 1843.

The number of steamboats employed in 1842, in navigating the Mississippi and its tributaries, was four hundred and fifty. The average burthen of these boats was two hundred tons each, making an aggregate of ninety thousand tons, and their aggregate value, at $80 00 per ton $7,200,000. Many of these were fine vessels, affording the most elegant accommodations for passengers, and comparing favorably, in beauty of model, completeness of finish, and all other particulars, with the best packets in any part of the world.

The number of persons engaged in navigating our steamboats varies from twenty to fifty for each boat. The average is about thirty-five persons, which will give a total of fifteen thousand seven hundred and fifty persons embarked in this navigation.

It appears, from the reports of the Louisville and Portland canal, that more than seven hundred flatboats have passed that canal in one year. At this rate there cannot be less than four thousand descending the Mississippi, and allowing five men to each boat, there are twenty thousand persons engaged in this branch of the navigation. The cost of these boats is $420,000, which, as they do not return, is an annual expense, and the expense of loading,

navigating and unloading them is $960,000, making the whole annual expenditure upon this class of boats $1,380,000.

In 1834, the number of steamboats in existence, on the Western waters, was two hundred and thirty, and they were estimated to carry thirty-nine thousand tons. The expense of running them was put down as follows:—

60 boats, over 200 tons, 180 running days, at $140 per day,	$1,512,000
70 boats, from 120 to 200 tons, 240 running days, at at $90 per day,	1,512,000
100 boats, under 120 tons, 270 running days, at $60 per day,	1,620,000
Total yearly expenses,	$4,645,000

This calculation, applied to the present number of boats, would result as follows:—

110 boats, over 200 tons, 180 running days, at $140 per day,	$2,772,000
140 boats, from 120 to 200 tons, 240 running days, $90 per day,	3,024,000
200 boats, under 120 tons, 280 running days, at $60 per day,	3,240,000
Total,	$9,036,000

This sum may be reduced to the different items producing it, in the following proportions:—

For wages, 36 per cent., equal to	$3,252,960
For wood, 30 per cent., equal to	2,710,800
For provisions, 18 per cent., equal to	1,626,480
For contingencies, 16 per cent., equal to	1,445,760
Total,	$9,036,000

To this is to be added for insurance, 15 per cent., on $7,200,000, - - - - - -	$1,080,000
Tolls of the Louisville and Portland canal, - -	250,000
Interest on the investment of $7,200,000, at 6 per cent., - - - - - -	432,000
Wear and tear of the boats, 20 per cent. - -	1,440,000
Total,	$12,238,000
Add for the flatboats, as above, - - -	1,380,000
Total annual cost of transportation,	$13,618,000

The rapid increase of this commerce may be seen from the following facts:—

Previous to the adoption of the steamboat navigation, say in 1817, the whole commerce, from New Orleans to the upper country, was carried in about twenty barges, averaging one hundred tons each, and making but one trip per year. The number of keelboats employed on the Upper Ohio could not have exceeded one hundred and fifty, carrying thirty tons each, and making the trip from Pittsburgh to Louisville and back in two months, or about three voyages in the season. The tonnage of all the boats ascending the Ohio and Lower Mississippi was then about six thousand five hundred.

In 1834, the number of steamboats was two hundred and thirty, and the tonnage equal to about thirty-nine thousand tons; and in 1842, the number of boats was four hundred and fifty, and their burthen ninety thousand tons.

In 1832, it was calculated that the whole number of persons deriving subsistence from this navigation, including the crews of steam and flatboats, mechanics and laborers employed in building and repairing boats, wood cutters, and persons employed in furnishing, supplying, loading, and unloading these boats, was ninety thousand. As the number of boats had doubled since that time, the

number of people directly engaged in and about this navigation, in 1842, was not less than one hundred and eighty thousand; but who shall place a limit to the numbers who are beneficially interested, in a business which distributes its millions of dollars for wood, its millions for wages, its millions for provisions, its millions for machinery and the labor of mechanics, and which transports a commerce whose value can only be computed by hundreds of millions?

The whole number of steamboats constructed at Cincinnati, in 1843, was forty-five; the aggregate amount of their tonnage was twelve thousand and thirty-five tons, and their cost $705,000; which gives an average of two hundred and sixty-seven tons for each boat, and about $16,000 for the cost of each.

The models of these boats, as well as their finish and accommodations, evince a progressive improvement upon the boats of former years. They have more length and less draught, and are faster than the last generation, while the hulls are more staunch, though they contain less weight of timber. The cabins are not so gaudy and expensive as those of the old boats, while they are greatly superior in comfort and convenience. The average cost is about $72 per ton, which is a great reduction from former prices.

All the work of these boats is done at Cincinnati, and gives employment to boat builders, carpenters, joiners, engine makers, blacksmiths, coppersmiths, painters, upholsterers, cabinet makers, chairmakers, and some other mechanics.

There were steadily employed at the Cincinnati ship yards, during the year 1843, in the heavier portions of the work:—

Hands at the Boat Yards, - - -	320
Joiners, - - - -	200
Engine and Foundery men, - -	200
Painters, - - - -	50
Total, - - -	770

Within the same year there were built, at Louisville, New Albany and Jeffersonville, thirty-five boats, of seven thousand four hundred and six tons, which cost $700,000. These boats would cost $20,000 each, would average two hundred and eleven tons, and would cost about $95 per ton.

And there were built at Pittsburgh, in the same year, twenty-five boats, of four thousand three hundred and forty-seven tons, of which the cost is not given. The average tonnage of the boats is about one hundred and seventy-three tons.

The aggregate of the boats built in 1843 is nearly as follows:—

	Boats.	Tons.
Cincinnati, - - -	45	12,035
Louisville, New Albany and Jeffersonville,	35	7,406
Pittsburgh, - -	25	4,347
Add for all other places. - -	15	3,000
Total, -	120	26,788

The whole tonnage of the Western boats previous to 1843, being ninety thousand tons, and the annual loss by destruction and superannuation being twenty per cent., the decrease by the latter cause for 1843, was eighteen thousand tons, and the increase twenty-six thousand seven hundred and eighty-eight tons, making a net increase of eight thousand seven hundred and eighty-eight tons.

It will be seen, that we have placed the tonnage of our Western boats at ninety thousand tons. This was con-

sidered to be the real aggregate of the tonnage, when the first edition of the Cincinnati memorial was prepared, in the winter of 1842 and '43. We have, since that time, had access to official returns, published under the sanction of Congress, showing the tonnage of the West to have been much larger, even at that time, than we stated it to be; but as we had based all our calculations on the amount stated by us, we have not, in this edition, altered the statement alluded to, but shall add such additional information as we have obtained up to the close of 1843.

By the official returns, it appears that the whole steamboat tonnage of the United States, on the last day of September, 1842, was two hundred and eighteen thousand nine hundred and ninety-four tons; which may be divided as follows, setting down the figures as we find them in the returns, and only transposing them so as to arrange them under the appropriate heads:

West.	*Tons.*
New Orleans,	80,993
St. Louis,	14,725
Cincinnati,	12,025
Pittsburgh,	10,107
Louisville,	4,618
Nashville,	3,810
Total,	126,278

North West.	*Tons.*
Buffalo,	8,212
Detroit,	3,296
Presque Isle,	2,315
Oswego,	1,970
Cuyahoga,	1,859
Total,	17,652

Other.	*Tons.*
New York,	35,260
Baltimore,	7,143
Mobile,	6,982
Philadelphia,	4,578
Charleston,	3,289
Newbern,	2,854
Perth Amboy,	2,606
Apalachicola,	1,418
Boston,	1,362
Norfolk,	1,395
Wilmington,	1,212
Georgetown,	1,178
Newark,	1,120
Miscellaneous,	4,767
Total,	76,064

The steamboat tonnage belongs to the internal commerce of this country, as we have no steam vessels engaged in foreign commerce, except two or three in the Gulf of Mexico. Of the whole two hundred and eighteen thousand nine hundred and ninety four tons, it appear that *two-thirds* belong to the West; and as a portion of the other tonnage is employed on routes leading to the West, and connecting with our highways, the commerce of the West may be safely stated as amounting to *more* than *two-thirds* of the commerce of the Union.

Estimating the number of steamboats from their average tonnage, there must be *one thousand* in the United States, of which *six hundred* belong to the West.

The table of tonnage above given shows where this vast commercial marine is employed. First, on the valley of the Mississippi: next at the city of New York, and then on the Lakes. From the port of New York there are some seventy or eighty steamboats constantly running;

while on the Lakes there are hundreds. In the valley of the Mississippi the number of steamboats now employed is equal to the whole number of those employed in England proper. This will appear from the following statement, extracted from McCullough's Gazetteer, of the steamboat tonnage of Great Britain in 1834:

	Steamships.	Tonnage.
England, - -	434	43,877
Scotland, - -	105	13,113
Ireland, - -	84	17,674
British dependences, -	49	8,032
Total, -	722	82,716

It appears then, that in 1843, the steamboat tonnage of the Mississippi valley exceeded, by forty thousand tons, the entire steamboat tonnage of the British Empire. In other words, the steamboat tonnage of Great Britain was only two-thirds that of the Mississippi valley. The magnitude of this fact will be best seen by considering that the entire tonnage of the United States is but two-thirds that of Great Britain; showing that this proportion is exactly reversed in western steamboat trade.

Not only is the building of steamboats increasing every year, but every year is opening new channels of trade and navigation. In the last year the river Platte was navigated by a steamboat for the first time, and it will not be long before the Yellow Stone, the Arkansas, Red River, and the Missouri, will employ more boats than are now floating on the Mississippi.

CHAPTER X.

Western Steamboats—subject continued.

It would be an endless task to attempt to keep pace with the growing amount of our steamboat tonnage, by continuing the long list of these facts and estimates from year to year. In 1834, we had two hundred and thirty steamboats, in 1842, we had four hundred and fifty, in 1843, a rapidly swelling commerce, and perhaps a closer estimate raised the number to six hundred, and now in 1848, we put them down at twelve hundred, repeating the remark, that we have always relied on authentic facts for our data, which have had reference, of course, to dates some time past, and that therefore our figures are probably, in all cases, too small.

The cost of building and of running boats has not changed essentially within the last few years. The prices of some items haven risen, but others have been reduced, so as to leave but little difference in the general results.

In the construction of the boats there has been a progressive and very decided improvement. Their models have been changed to suit the exigencies of the navigation. The great objects have been to obtain speed and capacity for carrying freight, with power to stem the heavy currents of our rivers, and the least possible draught of water. In all these respects our boats have been improved from year to year, and are still improving. The

most marked changes consist in a great increase in the length and decrease in the depth of the boats, adding to their speed and lightness of draught.

Boats are constructed now more than formerly for particular trades, and are specially adapted for the purposes for which they are intended. Lines of packets have been established, between all the more important places, which run regularly, and which have attained a commendable degree of punctuality in their departures and arrivals. All these are comfortable, many of them very fine, and a few of them very superior. The large passenger boats, running between New Orleans and Vicksburg, St. Louis, and Louisville, are inferior to nothing of the kind in any part of the world. The cabins are spacious and elegant, the state rooms commodious, and the tables equal to the ordinaries of the best hotels, and far superior to those of any but the very best. The officers are not only accommodating, but generally kind and hospitable, treating the passengers as their guests, and taking pains to render the voyage agreeable. The company on board these boats is usually good, and it is an admirable peculiarity in our western traveling, that fellow travelers avoid the exclusive and selfish deportment which is seen elsewhere, and mingle freely together, seeking the acquaintance and society of each other, and all contributing to the common comfort and amusement. A trip to New Orleans in one of our best boats often resembles a party of pleasure, and combines in its incidents much variety, and no small degree of luxury.

The men of business in the West, and all who are in in easy circumstances, travel often and very extensively, and are thus very widely acquainted with each other. Besides the crowds who go annually to New Orleans

upon business, there are other crowds who seek to while away a few of the weeks or months of the winter, in festivity, amid the gay and novel scenes of that busy metropolis. Large and cheerful parties thus meet on board the steamboats, and, as they must necessarily be several days together, they endeavor to accommodate themselves to each other, and to pass the time agreeably; and it often happens that the greater portion of the cabin passengers form one circle, in which affability and freedom from constraint are chastened by perfect decorum and good breeding. Music and dancing are the chief amusements; and at night, when the spacious cabin of one of our leviathan boats is lighted up, enlivened by the merry notes of the violin, and filled with well dressed persons, it seems more like a floating palace than a mere conveyance for wayfarers. These fine boats are safe as well as speedy, making the trip from Louisville or St. Louis to New Orleans in four or five days, and the upward voyage in six or seven days.

The mailboats between Louisville and Cincinnati are also very fine boats. Messrs. Strader & Gorman, the original proprietors of this line, have the merit not only of having been the first to establish a regular line of packets in the West, but of having carried out their plan with eminent success, with profit to themselves, and with great advantage to the public. They were the first to have fixed hours of departure, and to adhere to them with punctuality. Their boats have always been of the best class, the accommodations excellent, and the officers skilful and obliging; and it is with pleasure that we record the fact, so creditable to all concerned, that in more than twenty years, during which this line has been in existence, no accident has occurred by which the life or limb of a

passenger has been endangered. This line has lately passed into the hands of other owners, who run a morning and an evening line, and under whose management the boats have maintained, and we have no doubt will continue to maintain, their high character.

There is also a daily line of packets between Pittsburgh and Cincinnati, deserving of the highest commendation. There are few boats any where finer than the most of those engaged in this line. They are large vessels, with fine accommodations, and are well managed. The proprietors, in a recent advertisement, assert that in the last six years they have carried *two millions* of people, without injury to their persons, or three hundred and thirty-three thousand people annually. The character of the persons who make this statement, and the acknowledged excellence of their boats, leave no room to doubt its correctness, and, from our own observation, we feel no hesitation in giving implicit faith to it. The New York Courier and Enquirer, commenting on this fact, has this pointed remark:—

"What a movement is here of human beings, each intent upon his own well being, and acting in obedience to his own views of self interest!—what a future is unfolded for such a country, so replenished, and with such safe and rapid means of intercommunication!

"When, too, it is considered that there are various other avenues to the Western paradise, each crowded by its thousands, and its tens of thousands, one can hardly exaggerate the growth of such a country, or the responsibilities which devolve upon its general government to provide, by all adequate and constitutional means, for adding to the security of the great avenues and ports

which are thus annually thronged by emigrants and travelers.

"The fact that two millions of persons, to say nothing of property, have been transported on the waters that connect Pittsburgh with Cincinnati, should be conclusive with the general government in favor of the exercise of all its legitimate powers to improve the harbors of these cities, and the channels of the far descended rivers which connect them."

The boats that ply regularly between St. Louis and Louisville, Cincinnati and Pittsburgh, are very good, and furnish daily opportunities of intercourse between those cities, and there are also good boats running regularly between all these places and Nashville.

Without specifying more particularly, we may add, that there are boats now running periodically on all the tributaries of the Ohio and Mississippi; and as they are now constructed to draw less than *twenty* inches of water, there are few of the rivers that are not accessible to the benefits of this wonderful and all pervading invention.

There have been some terrible explosions on the Western waters, attended with a most melancholy destruction of life. These accidents have not been frequent within the last few years, and we think that the danger of them may be avoided by travelers who exercise an ordinary degree of prudence. They are almost invariably the result of gross and criminal negligence, and a proof of this is, that they scarcely ever occur on board the best boats. In all the cases that have been carefully investigated, the boilers have been found to be badly constructed, or worn out, or there has been a dereliction of duty on the part of the engineer or captain. This is now so well understood, and public opinion is acting so pointedly on

the subject, that steamboat owners are more careful than formerly in the selection of officers, and the latter can no longer outrage public sentiment by attempting to pass off such catastrophes as *accidents*. We have a class of masters of steamboats who are well known, and whose boats have never been visited by these calamities, which have been confined chiefly to boats and officers that have not deserved the confidence of the public. The traveler, therefore, who will be careful to select the best boats—those which have an established character, or are commanded by men of reputation, will run no more risk of life on board our Western boats than on those of any other part of the United States. Our boats will be detained by sandbars, and destroyed by snags, until the attention of Congress shall be procured to the improvement of our rivers; but these are not the occasions upon which life is placed in jeopardy. The explosion of boilers, so fatal to passengers, may be prevented, if passengers will not patronise bad boats, but carefully select such as have obtained and deserved a good reputation. There are enough such; the greater portion of our boats are well managed, and there is no country in which travelers are treated with greater civility, or travel with more safety or comfort, than on our Western rivers.

One of the most fatal catastrophes from explosion, that has ever occurred was that of the steamboat Moselle; and as we prepared an account of it at the time, we subjoin it, together with that of the Oronoko, in order that our readers may be able to judge for themselves of the horrors of such a scene.

Explosion of the steamboat Moselle.

The recent explosion of the steamboat Moselle, at Cin-

cinnati, affords a most awful illustration of the danger of steam navigation, when conducted by ignorant or careless men; and fully sustains the remark made in the preceding pages, that "the accidents are almost wholly confined to insufficient or badly managed boats."

The Moselle was a new boat, intended to ply regularly between Cincinnati and St. Louis. She had made but two or three trips, but had already established a high reputation for speed; and, as is usual in such cases, those by whom she was owned and commanded became ambitious to have her rated as a "crack boat," and spared no pains to exalt her character. The newspapers noticed the *quick trips* of the Moselle, and passengers chose to embark in this boat in preference to others. Her captain was an enterprising young man, without much experience, bent upon gaining for his boat, at all hazards, the distinction of being the fastest upon the river, and not fully aware, perhaps, of the inevitable danger which attended his rash experiment.

On Wednesday, the 25th of April, between four and five o'clock in the afternoon, this shocking catastrophe occurred. The boat was crowded with passengers; and, as is usually the case on our western rivers, in regard to vessels passing westwardly, the largest proportion were emigrants. They were mostly deck-passengers, many of whom were poor Germans, ignorant of any language but their own, and the larger portion consisted of families, comprising persons of all ages. Although not a large boat, there were eighty-five passengers in the cabin, which was a much larger number than could be comfortably accommodated; the number of deck passengers is not exactly known, but is estimated at between one hundred and twenty and one hundred and fifty, and the officers and

crew amounted to thirty—making in all about two hundred and sixty souls.

It was a pleasant afternoon, and the boat, with steam raised, delayed at the wharf to increase the number—already too great—of her passengers, who continued to crowd in, singly, or in companies, all anxious to hurry onwards in the first boat, or eager to take passage in the *fast running* Moselle. They were of all conditions—the military officer hastening to Florida to take command of his regiment—the merchant bound to St. Louis—the youth seeking out a field on which to commence the career of life—and the indigent emigrant with his wife and children, already exhausted in purse and spirits, but still pushing onward to the distant frontier.

On leaving the wharf, the boat ran up the river about a mile, to take in some families and freight, and having touched at the shore for that purpose, for a few minutes, was about to lay her course down the river. The spot at which she thus landed was at a suburb of the city, called Fulton, and a number of persons had stopped to witness her departure, several of whom remarked, from the peculiar sound of the steam, that it had been raised to an unusual height. The crowd thus attracted—the high repute of the Moselle—and certain vague rumors which began to circulate, that the captain had determined, at every risk, to beat another boat which had just departed—all these circumstances gave an unusual eclat to the departure of this ill-fated vessel.

The lading completed, the bow of the boat was shoved from the shore, when an explosion took place, by which the whole of the fore part of the vessel was literally blown up. The passengers were unhappily in the most exposed positions—on the deck, and particularly on the forward

part, sharing the excitement of the spectators on shore, and anticipating the pleasure of darting rapidly past the city in the swift Moselle. The power of the explosion was unprecedented in the history of steam: its effect was like that of a mine of gunpowder. All the boilers, four in number, were simultaneously burst, the deck was blown into the air, and the human beings who crowded it hurried into instant destruction. Fragments of the boilers, and of human bodies, were thrown both to the Kentucky and the Ohio shore, and as the boat lay near the latter, some of these helpless victims must have been thrown a quarter of a mile. The body of Captain Perrin, the master, was found dreadfully mangled, on the nearest shore. A man was hurled with such force, that his head with half his body penetrated the roof of a house, distant more than a hundred yards from the boat. Of the number who had crowded this beautiful boat a few minutes before, nearly all were hurled into the air, or plunged into the water. A few, in the after part of the vessel, who were uninjured by the explosion, jumped overboard. An eye witness says, that he saw sixty or seventy in the water at one time, of whom not a dozen reached the shore.

The news of this awful catastrophe spread rapidly through the city, thousands rushed to the spot, and the most benevolent aid was promptly extended to the sufferers—to such, we should rather say, as were within the reach of human assistance—for the majority had perished.

The writer was among those who hastened to the neighborhood of the wreck, and witnessed a scene so sad, that no language can depict it with fidelity. On the shore lay twenty or thirty mangled and still bleeding corpses, while others were in the act of being dragged from the wreck or the water. There were men carrying away

the wounded, and others gathering the trunks, and articles of wearing apparel that strewed the beach.

The survivors of this awful tragedy presented the most touching objects of distress. Death had torn asunder the most tender ties, but the rupture had been so sudden and violent, that as yet none knew certainly who had been taken, nor who had been spared. Fathers were inquiring for children, children for parents, husbands and wives for each other. One man had saved a son, but lost a wife and five children. A father, partially deranged, lay with a wounded child on one side, a dead daughter on the other, and his wife, wounded, at his feet. One gentleman sought his wife and children, who were as eagerly seeking him in the same crowd—they met, and were re-united.

A female deck passenger, that had been saved, seemed inconsolable for the loss of her relations. To every question put to her, she would exclaim, "Oh my father! my mother! my sisters!" A little boy, about four or five years of age, whose head was much bruised, appeared to be regardless of his wounds, but cried continually for a lost father, while another lad, a little older, was weeping for his whole family.

One venerable looking man wept a wife and five children; another was bereft of nine members of his family. A touching display of maternal affection was evinced by a lady, who, on being brought to the shore, clasped her hands and exclaimed, "Thank God, I am safe!" but, instantly recollected herself, ejaculated in a voice of piercing agony, "where is my child!" The infant, which had been saved, was brought to her, and she fainted at the sight of it.

A public meeting was called in Cincinnati, at which the Mayor presided, when the facts of this melancholy

occurrence were discussed, and among other resolutions passed, was one deprecating, "the great and increasing carelessness in the navigation of steam vessels," and urging this subject upon the consideration of Congress. No one denied that this sad event, which had filled our city with consternation, sympathy and sorrow, was the result of a reckless and criminal inattention to their duty, on the part of those having the care of the Moselle, nor did any one attempt to palliate their conduct. Committees were appointed to seek out the sufferers, and perform the various duties which humanity dictated. Through the exertions of the gentlemen appointed on this occasion, lists were obtained and published, showing the names of the passengers as far as could be obtained, and giving the following result:—

Killed, - - - - -	81
Badly wounded, - - -	13
Missing, - - - - -	55
Saved, - - - -	117
	266

As many strangers entered the boat but a few minutes before its departure, whose names were not registered, it is probable that the whole number of souls on board was not less than *two hundred and eighty.* Of the missing, many dead bodies have since been found, but very few have been added to the list of *saved.* The actual number of lives lost, therefore, does not vary much from *one hundred and fifty.*

Scarcely had our community time to realize the horrors of this explosion, when we received the intelligence of another, of which we subjoin the newspaper account.

Explosion of the steamboat Oronoko.

"On Saturday morning, the 'Oronoko,' of Pittsburgh, on her way from New Orleans, collapsed a flue opposite Princeton, about one hundred miles above this place, blowing all between the boiler and the stern of the boat literally into the river. The deck was crowded with passengers, estimated at one hundred, and but few are left surviving. She was towed to this place on Saturday night, with about thirty-five of the wretched sufferers, some dead, some lingering in the torments of death, and a few who will recover.

"As soon as she arrived, most of the medical gentlemen of the city, with numbers of our active and benevolent citizens, repaired to the boat and extended every relief that science and humanity could afford to the sufferers.

"The cabin-floor presented the most heart-rending scene we ever witnessed. Some were literally parboiled and writhing in the agonies of death, the skin had dropped from the flesh of others, and life was ebbing in some from inhaling steam, though exhibiting but slight evidence of external injury. The groans of some, the silent agony of others, the fortitude and firmness with which many approached the brink of eternity, presented a scene of horror and distress most shocking to behold.

"Of those who were brought here, eighteen or nineteen were buried yesterday. They were decently interred, and followed to the grave by a large concourse of our citizens. Thirteen were alive last night, but several of these cannot possibly survive.

"We have been unable to obtain the names of those who were blown overboard, as well as most of those who were buried here yesterday. They were all steerage passen-

gers, and many of them went on board at this place, so that the clerk could not give us their names. The engineer of the boat, John Porter, Edward Stowrs, an Englishman, Mrs. Flanigan and her two children, who started from this place in the Oronoko, were among the buried yesterday. Mr. Flanigan will recover from his injury.

"We have understood that seven or eight of those left at Princeton have since died.

"Col. Oliver lost seven or eight of his servants, and remained at Princeton taking care of two or three others that are badly scalded, and who are not expected to survive. His celebrated race horse, Joe Kearney, was scalded and died; one other severely injured.

"The cabin was as crowded as the steerage, and had the explosion taken place at breakfast, nearly all must have perished.

"Mr. Myers, who was steward last year at the Pinckard House, and his child, are thought to be the only cabin passengers seriously injured. He also would have escaped injury, but when the explosion took place he rushed from his state-room into the cabin with his child in his arms, and both were scalded; his wife remaining in her room and escaped. They remain at Princeton.

"The 'Oronoko' is a new boat, and one of the largest on the river. It is a most fortunate circumstance that the accident occurred about daylight, and that the boat's berths are all state-rooms. Nearly all were in bed, and none but those who opened their doors and rushed out suffered any injury.

"Such was the tremendous force of the explosion, that the box of the fly wheel, with a portion of the cabin's floor, were bursted open, filling the gentlemen's cabin with steam.

"This awful catastrophe will teach one salutary lesson on steamboat traveling—the security afforded by well constructed state rooms. Those of the 'Oronoko' were properly ventilated above, and before the steam had entirely consumed the atmosphere, there was sufficient time for the boat to move out into fresh air. A gentleman and his family, in the ladies' cabin, resisted all attempts to burst open his door, until the steam had disappeared. He, with great presence of mind and judgment, applied his hand repeatedly to the aperture for ventilating his room, but finding the hot steam rushing in, he declined opening his door. The upper layers of atmosphere were soon consumed, and they had to recline on the floor in order to obtain air fit for respiration.

"There is, we believe, no blame attached to captain Crawford, the commander of the boat. He was on the hurricane-deck in the discharge of his duty, sending out the yawl for passengers, and the boat had been *lying-to* about five minutes. When she was getting under way, at the third stroke of the engine, the explosion took place. Porter, the engineer, survived a short time, perhaps an hour, and declared that he had considered the condition of the boat perfectly safe—both as regards the water and steam. The boilers were some six or seven years old, having been taken out of the old Michigan, and Porter must have been deceived in the amount of steam or the strength of the boilers—the latter however, we understand, afforded no evidence of the deficiency.

"There is a discrepancy between the statements of some of the officers and a gentleman who was on the bank of the river at the time. The latter says that he thinks no steam escaped during the time the boat *lay-to*, while some of the officers are of a different opinion.

"A great many were blown overboard and lost. The number of lives lost is between fifty and one hundred."—*Vicksburg Sentinel.*

There are two features in this extract which often characterise similar notices. The one is, the usual assertion that no blame attached to the commander—which may have been true in this case—but which is seldom true. The other is the careless exaggeration of the statement, "blowing all between the boilers and the stern of the boat literally into the river,"—when the subsequent part of the account shows that the cabin was not blown off, nor much injured.

CHAPTER XI.

Commerce of the Western rivers—estimated value of the imports and exports, based on calculations made previous to 1842.

The matter contained in the following chapter, having been prepared for the Cincinnati Memorial of 1842, would require to be entirely remodeled to suit the increase which has since taken place. We prefer, however, to present the figures in their original form, and to make the requisite additions in a subsequent chapter, as, in this mode of handling the subject, we shall not only give the facts, but exhibit more clearly the increase of our commerce, during the five years which have intervened.

In estimating the value of the property floating upon the Ohio and Mississippi, at one time, or within any given period, much must be left to conjecture, as under our happy form of government no portion of it is subject to entry at a custom-house, or liable to any official registry, which would place on record the accurate statistics of this commerce. But we are not left entirely without data, from which to form an estimate approximating the true amount. We know that this trade is carried on by means of four hundred and fifty steamboats, of ninety thousand tons burthen, some of which, as the larger boats running to New Orleans, from the more distant ports, make from eight to fifteen trips per year; the boats carrying the vast trade from Pittsburgh, Cincinnati, and Louisville, to and from

St. Louis, make thirty trips, while a great number of boats ply between less distant points, and make their trips more frequently. If, however, we suppose that the average number of trips is twenty, our whole number of boats have the capacity to carry one million eight hundred thousand tons per annum. To this would be added the freights of four thousand flatboats, carrying, at an average of seventy-five tons each, three hundred thousand tons, and bringing the whole annual tonnage to more than two millions, if the steamboats always carried full cargoes, which, however, is far from being the case. But the fact that our boats are capable of carrying that amount of freights, and that they find sufficient business to keep them employed, forms an important link in the series of facts from which we form our estimate.

The actual amount of imports into New Orleans, by the descending trade of the Mississippi, is another important element in this calculation. This we obtain from a list published annually in that city, and obtained from the daily reports of the wharf masters, of the packages and merchandise actually landed. Taking the year from September 1, 1841, to August 31, 1842, estimating the supposed contents of the packages of which the contents are not actually stated or known, and affixing the present reduced prices, we find that the imports, as stated in this list, amount to $35,764,477 36.

Another mode of deciding the amount of this trade, is by reference to the number of sea vessels arriving at the port of New Orleans, which may be ascertained from the reports of the custom-house. These are not at this moment within the reach of the writer. But we state, on the authority of the newspapers of that city, that the shipping in port at one time, in December, 1843, amounted to up-

wards of six hundred—all of which are employed in carrying away the staples of the West, while their crews consume a large amount of products, not included in the list of staples. The country which employs six hundred ships in bearing off its products, by one outlet, while it exports largely in the opposite direction, by the lakes, canals, and railroads, can be neither small in extent, nor inconsiderable in its wealth, industry, and resources.

This list, it will be perceived, includes only the more important articles of commerce; but those which are not embraced in it would amount to a very considerable annual sum. It does not include live stock; yet horses, cattle, sheep, and hogs are shipped to New Orleans in immense numbers; and the amount of poultry, eggs,* vegetables, and other provisions, carried to that market, from the most distant parts of the Mississippi Valley, is great beyond the belief of those not conversant with the facts. New Orleans, it will be recollected, is situated in a southern climate, and in a planting country, where but a scanty supply of food is raised for home consumption, and it is a seaport at which the number of vessels, congregrated at the business season, is greater perhaps than at any port in the Union, to say nothing of the large number of steamboats, and other river craft; and the supplies of provisions for that city, and for the shipping and boats lying there, are floated down the Mississippi.

A variety of manufactured articles also, such as machinery, furniture, and many fabrics of iron, tin, copper, wood, and leather, are not included in the list referred to.

*It is a fact that one individual at Cincinnati has negotiated drafts through the banks to the annual amount of from $20,000 to $25,000, for the proceeds of *eggs* shipped from that place to New Orleans.

Cincinnati alone manufactures sugar mills for the southern market, to the amount of $200,000 per annum, a considerable portion of which is shipped to New Orleans. Nor does that list include any merchandise or produce which is landed without the limits of the municipalities, which would include the cargoes of many steamboats, and a still larger portion of the lading of flatboats. Neither does it include shipments of specie, nor the money carried in various forms on board of steamboats. We arrive then at the conclusion, that the whole annual value of the arrivals at New Orleans by the river, from descending boats, is not less than fifty millions. After making this estimate, we are gratified to learn, from an authentic source, that an intelligent committee of gentlemen at New Orleans, making an estimate recently, from the same data, arrived at the same conclusion.

To this is to be added the trade to that part of the Mississippi, called "the Coast." The shores of the Mississippi, on both sides, from the mouth of the Ohio downwards, receive supplies of live stock, provisions, machinery, farming implements, cabinet ware, tin ware, saddlery, and a great variety of fabrics, from the more northern states. The population thus supplied is not less than one million of souls, who receive all the luxuries, and most of the necessaries of life, by way of these rivers.

A still more important addition is the trade which passes from town to town, and from state to state, throughout the West, and which is independent of what are termed exports or imports. It is difficult to form any adequate idea of this trade, but we, who see it going forward, and witness the gigantic means required to keep it in operation, know that it forms a large item in the estimate of our trade and industry. The population of the Western plain

was nearly seven millions at the enumeration made in 1839 and 1840, for the census of 1840, and the trade to which we now allude is that of an enterprising people, whose numbers may now be assumed as fully seven millions, scattered over a continuous but vast region, embracing a great diversity of soil, climate and products, and affording the materials and facilities for an almost unlimited interchange of commodities. The furs and lead of the northern portion, the iron of Pennsylvania, Ohio, Kentucky, and Tennessee, the grain, the salted provisions and live stock of the middle region, and the sugar, cotton, and tobacco of the south, would alone furnish the elements of a vast internal commerce.

The manufactured articles consumed in the West are now made, to a great extent, within our limits, and transported to every part of our country, and of course the raw materials which are employed in these fabrics enter largely into our freights. At Cincinnati alone, by an accurate enumeration made for the year 1841, it appears that there were ten thousand six hundred and forty-seven workmen engaged in mechanical and manufacturing employments, and that the annual value of their products was $17,432,670. And the amount of provisions, in addition to those included in the above estimate, passing through our city from the interior, was computed at $6,000,000—making, $22,432,670.

After deducting the consumption of our city, and the articles which are shipped to New Orleans, there will remain something over $10,000,000 of manufactured articles which are transported to various markets within the Western States, and nearly all of which float on our rivers.

The manufactures of Pittsburgh do not vary greatly in amount from those of Cincinnati, but in the $17,000,000

set down for Cincinnati, are included $5,000,000 of provisions and other articles which find a market at New Orleans, and which are included in the estimate of the imports to that city, while the labor and capital of Pittsburgh are more largely invested in fabrics of iron, glass, &c., which are distributed widely throughout the West. The shipments, therefore, from both places, to other parts of the West, may be safely stated at $25,000,000. Louisville and New Albany would furnish $5,000,000 more to this head; and if three points on the Ohio furnish $30,000,000 of articles to the trade within the Western States, it cannot be an unreasonable calculation to allow, for the raw materials imported into those places, and for the whole of this branch of trade carried on between all other places in the West, including St. Louis, $40,000,000 more, making for the whole of this interior interchange of commodities an aggregate of $70,000,000, which, added to the $50,000,000 exported through New Orleans, would give a grand total of $120,000,000, for the annual amount of the productions of the Western States, which are freighted upon the Ohio and Mississippi. This calculation we find corroborated by that of an intelligent committee at St. Louis, which is the more satisfactory, as the vastness of the commerce centering at that point, and the great extent of country through which the operations of her enterprising citizens are carried, affords them the best data from which to form a deliberate opinion.

To the above amount is to be added the value of the imports of foreign goods, which are floated to their places of destination upon the same waters. And here it may be stated with sufficient accuracy for the present purpose, that if our exports to New Orleans amount to $50,000,000, our returns from the same point will equal

that sum, while the imports from the eastern cities, by the way of Wheeling, Pittsburgh, and the Lakes, embracing a large proportion of all the European goods used in the West, will amount to an additional sum of $50,000,000 per annum, making in all $100,000,000 of imports.

In making these estimates, we feel satisfied, that if the statistics of our trade could be ascertained, they would greatly exceed our estimate, and that we may safely assume the aggregate value of the property floating on our great rivers to be $220,000,000 per annum.

The imports into the United States from foreign nations, for the year 1841, were $127,916,177, and the exports $121,851,803, and when it is recollected that in estimating our interior trade we have based some of our heaviest items upon data collected three years ago, that all our values are calculated at prices greatly reduced, and that our whole country, with its trade and production, are in a state of rapid progression, it will be readily seen that this interior commerce is fully equal to our commerce with foreign nations, that its character is equally National, and its protection equally essential to the common benefit and advantages of all the States.

It is also true, that of the foreign goods imported into the United States, the West is the most important consumer, and that besides our direct contribution to the National revenue in the cash paid for lands, we pay a large proportion of the imposts on foreign merchandise; and that we furnish a larger proportion of the public revenue than any other part of the Union, while the proportion of the National expenditures made among us has been comparatively trifling.

We do not make this comparison invidiously, but in vindication of our just rights. We have seen the trea-

sures of the American people lavished in bountiful appropriations, for surveys and defences of the coast, for the improvement of the harbors, for the erection of light-houses, for the building of custom-houses, for astronomical observations, and various other purposes, in aid of the navigation and commerce of the ocean, not only without regret, but with a willingness to contribute freely to whatever may conduce to the general prosperity. But while sustaining our just proportion of the expenditures for commercial purposes, upon one boundary of the Union, and for the benefit of one branch of the national wealth and enterprise, we claim the appropriation of a like proportion of the public treasure, for the protection of another branch of commerce, equally national, and alike important. We claim it as the equitable right of a numerous population, who have built up a great internal empire by their own wealth and labors, with little aid from the common purse, who defended it during the perils of the war with their blood, and are daily enlarging its boundaries and resources by their industry, their patriotism, and their public spirit. We urge it, as the true policy of a wise people, in reference to their own future prosperity. The West is the centre of the Union, the citadel of its power, the great living fountain, whose boundless resources are destined to sustain and enrich the nation. Here will soon exist the millions who will govern our vast republic, and the treasures resulting from the labors of an energetic people, which must circulate through every channel of commerce and industry, to the remotest boundaries of our dominion, and to every land to which the American flag shall find access; and here should the nation lay broad and strong the foundations of its future greatness.

We may fairly refer to the prospective increase of this

trade, as it is obvious that it must not only be great, but beyond the compass of any reasonable calculation. The vast amount of unsettled land of the finest quality, and the tide of emigration which is rapidly pouring in, leave no room to question the speedy growth of the country, or to doubt that its agricultural products will be multiplied in an increasing ratio. Another great interest is growing up among us, which will vastly accelerate this process. Already we manufacture largely. Pittsburgh and Cincinnati, to say nothing of other points, stand prominent among the manufacturing towns of the Union; and nature has scattered over our land with a profuse munificence, all the elementary principles and materials required for the sustenance of manufacturing industry. The most important of minerals, iron, is found in Tennessee, Kentucky and Ohio, and doubtless may be found in other places, of the most superior quality, and admirably adapted to every purpose for which that metal is used. Lead is equally abundant. Cotton, hemp, and wool, are among our staples. The country abounds in water power. The cotton of Mississippi can be delivered at Cincinnati as cheaply as at New Orleans, and there is no place in the Union where the laborer can be supported with greater comfort and economy. The pittance which elsewhere will barely procure the necessaries of life, will here spread his table with its luxuries. With beef and pork at two cents per pound, wheat at seventy cents per bushel, corn at twelve and a half cents per bushel, potatoes at twenty-five cents per bushel, turkeys at twenty-five cents, chickens at eight cents, coal of the finest quality at from six to ten cents per bushel, and wood at $1 50 per cord, we must take this branch of industry from any country having a

more sterile soil and less genial climate. The raw material, the motive power, the provisions are here; the market for the manufactured article is here; and the labor will come, whenever we say that we are ready to give it employment.

We cannot forbear from quoting some valuable facts, which are contained in a late number of Hunt's Magazine, in which the writer shows the immense amount of the agricultural products of the United States—of which the West is known to furnish the greatest proportion:—

"Of the amount of the several species of agricultural products yielded by the country, we are furnished with full data by the statistical returns, which, although perhaps not entirely accurate, present as complete a statement as could, under the circumstances, have been furnished. By a table, compiled from these returns, it appears that we have produced during the year ending the 1st of June, 1840, the products, a statement of which we here subjoin, with their amount.

LIVE STOCK.

Horses and mules,	4,333,669
Neat cattle,	14,871,596
Sheep,	19,311,374
Swine,	26,301,293
Poultry of all kinds, estimated value,	$9,344,410

CEREAL GRAINS.

No. bushels Wheat,	84,823,272
" Barley,	4,161,504
" Oats,	123,071,341
" Rye,	18,645,567
" Buckwheat,	7,291,743
" Indian Corn,	377,531,875

VARIOUS CROPS.

No. pounds Wool, - - -	35,802,114
" Hops, - - - -	1,238,502
" Wax, - - -	628,303
Bushels Potatoes, - - - -	108,298,060
Tons Hay, - - - -	10,248,108
Tons Hemp and Flax, - - -	95,251

TOBACCO, COTTON, SUGAR, &c.

Pounds Tobacco gathered, - -	217,163,319
" Rice, - - - -	80,841,422
" Cotton gathered, - -	790,479,205
" Silk Cocoons, - - -	61,552
" Sugar made, - - -	155,100,809
Cords Wood sold, - - - -	5,083,891
Value of the produce of the Dairy, -	$33,787,008
" " Orchard -	$7,556,904
Gallons Wine made, - - -	124,734
Value of home made or family goods,	$29,023,380

" He also states, as a fact which has escaped the observation of many, that the Indian corn raised in Tennessee is nearly three times the amount raised in Pennsylvania, and more than four times the quantity produced in the great state of New York, and yet Tennessee, in the north, is hardly looked upon as an agricultural state.

" Tables are given which show that two-thirds of the crop of Indian corn is raised in the slave-holding states—and of this quantity but a very small portion is exported. It is the great staple for the food of all classes—and for beast as well as man. In these states, a comparatively small amount of wheat is raised, though the crops of oats are large. The great wheat growing states are Ohio, Pennsylvania, New York, and Virginia, though it is known they have been greatly gained on the past two years by Illinois and Michigan.

"The great corn growing states are Tennessee, Kentucky, Virginia, Ohio, Indiana, North Carolina, Illinois, Alabama, Georgia, Tennessee being the greatest. In 1839, she raised forty-four million nine hundred and eighty-six thousand bushels. Tennessee therefore is the banner state in corn, Ohio in wheat, and New York in oats; while in the aggregate of these three principal grains, Ohio is the banner state of the Union—Pennsylvania rating number five in the list. New England stands very low in the scale, in both corn and wheat, and not very high up in oats. Massachusetts and Connecticut are both below Delaware in their product of wheat and corn.

"The crops of 1842 are estimated at eight hundred million bushels, the whole of which in price would average about the average selling price of corn, or 40 cents per bushel; which gives the enormous aggregate of $320,000,000, as the worth of the present year's grain crops, exclusive of rye, buckwheat and barley—which, according to the same calculation, is worth about $16,000,000 more, giving a grand total of $336,000,000!! This is indeed a great country, and in nothing greater than its agricultural resources, which are but partially enumerated above, and which, too, have hardly begun to develop themselves."

"If there is any truth in figures, we have here abundant evidence, that agriculture is the paramount interest of the country, the source of its commerce, the fountain of its wealth. The West is by far the most extensive, fertile, and productive part of the Union, and furnishes the most valuable portion of these products; the vast amount of which corroborate the estimate we have made of the

value of our trade. And we add, the further inference; if the products of the nation be so great, how important the great central avenues by which they must find a market!

CHAPTER XII.

Commerce of the Western rivers continued—Col. Abert's report.

We presented, in the preceding chapter, some views of the West, founded on data collected previous to the year 1842, and embraced in the Cincinnati Memorial of that year. We have now before us a valuable report, "made by Lieut. Col. Abert of the bureau of topographical engineers, in reply to a resolution of the United States Senate, January 15, 1847," in which the same subject is handled with much ability. It will be perceived that Col. Abert has adopted the Cincinnati Memorial as the basis for a portion of his report, relying upon the facts we present, while he arrives at results somewhat different from ours. It is to be recollected that the Memorial of the citizens of Cincinnati contained the first attempt to form an estimate of the aggregate commerce of the West, and that it has been succeeded by a number of publications in various forms, some of which have been able and instructive, and which have elicited many new facts and views. It is quite obvious, that our view of a subject so broad, and composed of such a multiplicity of elements, none of which had been previously collected together, must have been defective. We only aimed at an approximation to the truth, and are happy to find that we have been the means of inducing others to enter upon the same field of usefulness.

The following remarks from that document will be found interesting, and we make no apology for extracting so largely, as the reasoning is founded chiefly on data furnished by ourselves:

"*The commerce of the western rivers, and its probable increase.*

"I have found it extremely difficult to obtain exact information on this head. It does not appear to have attracted as much and as early attention as the trade of the Lakes, or to have had as many engaged in collecting or reporting its details—probably on account of its palpable and vast extent, which, visible to every observer, was considered sufficiently notorious without the formality of record. Circulars were, however, written to all those whose official position or literary reputation induced the belief that they could furnish the desired information. But the answers have too generally disappointed expectation, and my chief reliance is upon the records of our daily and periodical journals—upon the matter collected and reported in the Cincinnati Memorial for 1842, and other papers of that kind. The memorial is the result of a meeting held in Cincinnati, for the purpose of addressing Congress "on the subject of removing obstructions from the western waters." A committee of seventeen highly informed persons were appointed to draw up the memorial, upon which it is evident they bestowed great labor of investigation and care of research.

"From official returns of the Treasury Department, it appears that the steamboat tonnage of the western rivers, for the year 1842, was as follows:

New Orleans,	80,993
St Louis,	14,725
Cincinnati,	12,025
Pittsburgh,	10,107
Louisville,	4,618
Nashville,	3,810
Total,	126,278

and from the same authority, the steam tonnage for 1846, amounted two hundred and forty-nine thousand and fifty-five.

"This is given as the entire steam tonnage of the westen rivers, as well of that employed on the local or way commerce, as that employed between the different ports and New Orleans.

"There are no official returns of other kinds of tonnage; but the Cincinnati Memorial supposes there are four thousand boats of other kinds (not steamboats) employed on these rivers, which carry on an average seventy-five tons each, making three hundred thousand tons. This amount added to the steamboat tonnage will give, for the year 1842, for the total tonnage of all kinds employed on the western rivers, an aggregate of four hundred and twenty-six thousand two hundred and seventy-eight tons.

"The flatboat navigation of these waters is altogether a down-stream navigation—the boats at the end of a voyage being generally broken up and sold. They are yet, however, used to a great extent, as they consume much of the spare timber of the country, and furnish a cheap freight. It would not, I think, be unreasonable to suppose that two series of these boats are used in a year, and from various circumstances connected with them, there can be no doubt that they generally carry a full freight. According to this last supposition, the amount of produce of all kinds

carried to market by these boats in one year, is six hundredthousand tons.

"The steamboat navigation is of a different character. It is repeated as often as the condition of the boat, the season of the year, and the state of the waters will admit. Taking into consideration these circumstances, and making allowance for the reflection that these boats are not always loaded to their full capacity, we will suppose that the steamboat tonnage is repeated ten times a year, or that there are ten trips of the steam tonnage from its landing places to New Orleans. This supposition will give, for the steamboat freight of a year, one million two hundred and sixty-two thousand seven hundred and eighty tons, or a total of merchandise (exclusive of the way trade,) transported on the western rivers for the year 1842 of one million eight hundred and sixty-two thousand seven hundred and eighty tons.

"The next question is to determine the probable monied value of this commerce. For this we have no direct data, but have to resort to inference and comparison. It is well known that a great portion of the produce of the West is of a much greater value per ton than that of the lakes; but if to obtain its value it be assumed as of no greater value per ton than the commerce of the lakes, we shall clearly show, we think, the absence of all efforts to exaggerate.

"The total tonnage transported on the lakes has been shown to be three million eight hundred and sixty-one thousand and eighty-eight tons: but this is a duplicate quantity. It exhibits the total amount of exports and imports at all places, and is, therefore, in all probability, an exhibit of double the real amount of tons of merchanside. Assuming this supposition as correct, the nett amount

of tons of lake goods transported is one million nine hundred and thirty thousand five hundred and forty-four—and as it has been shown that the nett value of these goods is $61,914,910, we have for the nett value, per ton, $32 07.

"It has also been shown that the nett tons of merchandise of the western rivers with New Orleans, exclusive of way trade, was, for 1842, one million eight hundred and sixty-two thousand seven hundred and eighty tons. Now, if we apply to this amount the value of the lake commerce per ton, as just given, we shall have, for the direct commerce of the western rivers with New Orleans, an amount of $59,739,354.

"New Orleans being the point at which this commerce is concentrated, the returns of that place would merely duplicate the commerce; they have, therefore, not been used. But these returns would also, from the same reason, be highly corroborative evidence of the amount.

"Referring to the official returns of the amount of exports and imports of New Orleans for the year 1842, we find them to be $50,566,903—a sufficiently adequate coincidence with the river trade, as just given, to sustain the probable accuracy of the suppositions which have been adopted in reference to that trade, and to justify the amount of exports and imports of New Orleans, in being taken as an exhibit of the commerce of the western rivers with that city.

For 1842, then, this commerce can be stated at	$50,566,903
In 1846, a statement from the Treasury Department makes it - - - -	62,206,719
Showing an increase, in four years, of -	$11,639,816

or an average annual increase of five and three-fourths per cent.

"We have as yet spoken only of the direct river commerce, and not of the indirect or way commerce—of that immense amount of commodities which is interchanged between city and city, town and town, place and place, on the western rivers, and which forms no part of the New Orleans commerce, but which may be appropriately designated as the coasting commerce of the western rivers.

"'The shores of the Mississippi,' says the Cincinnati Memorial, 'on both sides, from the mouth of the Ohio, downwards, receive supplies of live stock, provisions, machinery, farming implements, cabinet ware, and a great variety of fabrics from the more northern states of the great valley.

"'A still more important addition is the trade which passes from town to town, and from state to state, throughout the West, and which is independent of what are termed exports and imports. It is difficult to form an adequate idea of this trade; but we who see it going forward, and witness the gigantic means required to keep it in operation, know that it forms a large item in the estimate of our trade and industry.' Then, after enumerating the items and the trade of places upon which its judgment is founded, the memorial adopts the conclusion, that the aggregate of this way trade, or interchange of commodities, is 'seventy millions' in addition 'to the fifty millions exported through New Orleans.'

"Upon the authority of the Cincinnati Memorial, we shall, therefore, adopt for the way commerce for the year 1842, the amount of seventy millions.

"To bring this amount up to 1846, we will apply to it the same average rate of increase, five and three-fourths per cent., which the direct river commerce has been found

to experience, and the result will be (for 1846) eighty-six million one hundred thousand.

"From the foregoing exposition, then, the total commerce, in merchandise of all kinds, of the Western rivers, can be stated for the year 1846 at (nett value) $148,306,719.

"This amount should be strictly understood as indicating the nett value. The floating value cannot be less than double this amount (the exports of one place being the imports of another) or equal to $296,613,438 for the year 1846.

"The passenger trade of this river is very great. I am, however, without any means of stating it except by comparison and inference. It is fair, I think, to suppose that the passenger trade is confined exclusively to the steam tonnage. The steam tonnage of the lake is sixty thousand eight hundred and twenty-five, and the value of the passenger trade for that tonnage is stated at $1,250,000.

"The steam tonnage of the Western rivers is stated, for 1842, at one hundred and twenty-six thousand two hundred and seventy-eight tons.

"This tonnage would, therefore, yield in the same proportion for its passenger trade, an amount of $2,595,108. Then, to bring the amount up to 1846, at an average yearly rate of five and three-fourths per cent., it will be $3,191,982; or, the total commerce of the Western rivers is, for the year 1846, $151,498,701.

"The cost of the steamboat tonnage employed in this trade, is stated to be $80 the ton, which makes the total cost, - - - - - -	$10,102,240
"Add for the craft employed in the trade, (Cin. mem.) - - - - - - - - -	420,000
"Making the total cost of all the river craft, in 1842,	$10,522,240

"Supposing it to have undergone the same ratio of increase five and three-fourths per cent., it will amount, in 1846, to - - -	$12,942,355
"The yearly expense of sustaining this craft, and keeping it in activity, is stated by the Cincinnati memorial to be, for steam craft, - -	$15,039,709
"Other craft - - - - - -	1,380,000
	$16,419,709
"Which, at an average increase of five and three-fourths per cent., would be, for the year 1846,	$20,196,242

"From the most careful calculation of the hands employed in those boats as mariners (not shore employees) the steamboats have eight thousand four hundred and eighteen hands. All other kinds of craft, twelve thousand. Total, 1842, twenty thousand four hundred and eighteen, which, at the increase which has been assumed, of five and three-fourths per cent. per year, will amount, in 1846, to $25,114.

"These amounts are, however, too small. They do not, in my judgment, exhibit a just value of the commerce of the western rivers, the internal or coasting commerce of those rivers. The chief error arises from attributing to this extensive commerce no greater ratio of increase than that which the commerce of New Orleans has experienced. A different view will now be taken, in which this cause of error will be eliminated.

"It has been previously shown that, from the reports of the Treasury Department, the steam tonnage of the western rivers was, for the 1842, $126,278, and for the year 1846, $249,055; making an increase in four years of one hundred and twenty-two thousand seven hundred and seventy-seven tons, or nearly one hundred per cent., or an average of twenty-four and three-tenths per cent.

But as the direct trade with New Orleans did not experience, during the same period, a greater average annual increase than five and three-fourths per cent., this vast increase of the steam tonnage of these rivers must be owing chiefly to the vast increase of the way or internal river commerce. Throwing fractional parts out of consideration, and deducting for the direct New Orleans trade, these facts will prove that the way commerce of the western rivers has experienced, since the year 1842, a regular average annual increase of nineteen per cent.

"Now taking the data of the Cincinnati Memorial as correct, namely, that the way commerce of the western rivers amounted, in 1842, to $70,000,000, it will, at this rate of increase, be, for the year 1846, $123,200,000; add to this the trade with New Orleans for the same year, namely $62,206,719, and we have a total (exclusive of passenger trade) of $185,406,719.

"If we now treat the passenger trade, in reference to the foregoing exposition of steam tonnage, it will justify the following results.

"The steam tonnage of the lakes gave a passenger trade of $1,250,000. This tonnage was sixty thousand eight hundred and twenty-five, therefore, at the same rates, the steam tonnage of the western rivers, which for 1846 was two hundred and forty-nine thousand and fifty-five tons, should give for the passenger trade of that year, an amount of $5,118,269; taking, therefore, these three items, namely, New Orleans trade, way trade, and passenger trade, we have, for the gross amount for 1846, $190,524,988.

"Our first view of the subject made these items $151,498,701.

"A third view may be taken, in order to obtain some

accurate expression of the value of the commerce of the western rivers.

"The steamboat tonnage of these rivers, for 1844, has been shown to be two hundred and forty-nine thousand and fifty-five. This includes the whole tonnage, as well that engaged in the New Orleans trade, as that engaged in the coasting river trade. But the value of the merchandise of the two trades differs greatly; that for New Orleans being of a much greater value per ton, than that of the coasting river trade. Of the New Orleans trade an exact value has already been stated, the object will now be to determine the value of the coasting river trade. Deducting one-fifth from the above tonnage, as the proportion which can, with propriety, be considered as exclusively employed in the New Orleans trade, it will leave, for the river trade, one hundred and ninety-nine thousand two hundred and forty-four tons. Then, supposing this tonnage to be as actively employed as the tonnage of the lakes, it will give twenty-eight 21.01 trips per ton the year, or the transportation of five million six hundred and twenty thousand six hundred and seventy three tons per year. This, however, should be viewed as a duplicate tonnage, the exports of one place being the imports of another. The nett amount of transported goods will, therefore, be two million eight hundred and ten thousand three hundred and thirty-six tons; of this amount there should be added, for the flat and keelboat navigation, six hundred thousand tons, making a total of three million four hundred and ten thousand three hundred and thirty-six tons.

"It has been previously shown that the value of the lake commerce is $32 07 per ton. It will, I presume, not be considered unreasonable, to suppose the coasting

river trade of the western rivers to be of an equal value per ton of the lake trade. Now, applying this supposition to the above tonnage of goods, we have, for its monied value, $109,369,475; add for the New Orleans trade, as already estimated, $62,206,719; add for the passenger trade, $5,118,269, total, $176,694,463.

"We have now three expressions for the value of the trade of the western rivers with the data of each:

1st. - - - -	$151,498,701
2d. - - - - -	190,528,988
3d. - - - -	176,694,463

"I have already said, and given reasons for so saying, that the first is too small. Taking the second and third as nearer approximations to truth, and using the mean of these two, the amount is $183,609,725. I shall therefore assume this mean as a reliable exposition of the commerce of the western rivers for the year 1846. I again desire it to be understood that the foregoing is an expression of the nett value of the trade, free from the duplicating which results from the importation of one place, being the exportation of another.

"The Cincinnati Memorial represents the population of the great valley, a population which can be considered as depending upon these rivers as a means of communicating with a market, for the year 1842, at six million four hundred and sixty-one thousand eight hundred and ninety-two, which at the average increase of population throughout the United States of 3.41 per cent., will make the population so situated, for 1846, amount to seven millions three hundred and forty-three thousand two hundred and two.

"I do not make the population as great probably from a more rigid definition of the region depending upon the

western rivers as a means of communicating with a market. Embracing all of the West which can in my judgment be placed in that category, and taking the census of 1840 as a guide, or the census by States of a later date, where it can be had, I have made out the following results:

1. Pennsylvania, one-sixth of its population -	287,339
2. Virginia, one-eight " " - -	154,947
3. Ohio, (all except ports depending upon the lakes)	796,348
4. Indiana, ditto " - - -	435,605
5. Arkansas, all of its population - -	97,574
6. Louisiana, " " - -	352,411
7. Mississippi, two-thirds " - - -	250,434
8. Tennessee, all " - -	829,210
9. Kentucky, all " - -	779,828
As per census of 1840 " - -	3,983,696
To which add for the annual average increase of 3.41, in order to bring it to 1846,	815,000
	4,798,696
10. Illinois, all except parts depending upon the lakes	520,786
11. Wisconsin, the same, (census of 1845) -	38,819
12. Missouri, the whole, " " - -	511,937
13. Iowa, the whole, " " -	81,920
As per census of 1845, - - - -	1,153,462
Add for the forgoing ratio for 1 year, to bring it up to 1846, - - - -	39,333
	1,192,795
Now adding the amount previously ascertained, of states from the census of 1840,	4,798,760
And we have the aggregate, - -	5,991,555

"There is also a portion of Alabama, North Alabama, which should be added to the above amount, embracing at

this time about two hundred thousand inhabitants, making as the total population depending upon the Western rivers, as a means of communicating with a market, for the year 1846, six million one hundred and ninety-one thousand five hundred and fifty-five.

"The above result may probably be objected to, on the ground that the general average increase throughout the United States which has been applied to the census of 1840, to determine the population of the great valley for 1846, is too small a ratio for that portion of the country. It no doubt is so in reference to the parts of the great valley, and to recent states of the valley, which, from various considerations, have experienced a rapid and great increase. But much of this increase is rather a change of population from one part of the valley to another than an actual increase of population to the whole. Yet, however, it cannot be doubted that the population of the great valley has increased at a much greater ratio than that of the United States generally, and therefore that our calculation exhibits less than the real result. In order to get at a nearer approximation to the real population for 1846, I have taken the relative proportions of the population of those states which have had a census for 1835, and then of those states of which the census is not later than 1840, adding, in order to bring the calculation up to 1845, the ratio of increase which each state experienced from 1830 to 1840, and then adding for one year the average applicable to the valley states only, I find that the population depending upon western rivers as a means of communicating with a market may be stated, for the year 1846, at six million five hundred and seventy-six thousand and twenty seven, and that the rate of increase, from 1840 to 1845, may be fairly stated to be about five per cent."

CHAPTER XIII.

Commerce of the Western rivers continued—Col. Abert's report—subject pursued to the present time.

While we acknowledge the courtesy extended to our pamphlet, in the official report from which we have extracted so copiously in the preceding chapter, we think the author mistaken, not perhaps in considering our amounts too small, but in attributing to us a process, in arriving at these results, which we are not conscious of having pursued. We are not aware of having adopted a ratio of five and a half per cent. for the annual increase of the commerce of New Orleans, or of applying that rule to the aggregate commerce of the West. That our figures were too small is now very obvious, but that those of the report of Col. Abert are quite as far below the mark, we think equally clear; and there is no doubt that such will be the relative character of all fair statistical writings in regard to this country, for many years to come; the actual condition of things at any given date, and the increase will be found to exceed all previous estimates founded on facts, and the latest calculation will arrive nearest to the truth, without actually reaching it.

The imports by the river into New Orleans, for the year, commencing September 1, 1841, and ending September 1, 1842, we estimated at $50,000,000. The actual amounts of those imports, the four succeeding

years, as reported in the New Orleans Prices Current, are as follows:—

1842–3 - - - -	$53,728,054
1843–4 - - - -	60,094,716
1844–5 - - - -	57,199,122
1845–6 - - - -	77,163,464
1846–7 - - - -	90,033,256

Here the whole increase of the last four years is shown to be $36,305,202, or $9,076,300 per annum, which would be about seventeen per cent. per annum. In other words, the productions and manufactures of the Western and South-western states, arriving at New Orleans by way of the river, amounted, in the year ending in September, 1843, to $53,000,000, and in the year ending in September, 1847, to $90,000,000, showing an annual average increase of about seventeen per cent.

Instead, therefore, of an annual increase of five and a half per cent., we must assume that increase to be something like seventeen per cent., and even this ratio will be too small unless the calculation be made for short periods, and the increase compounded.

We shall endeavor to show that we are not mistaken in this estimate, by presenting an illustration, which, we think, affords a striking coincidence, if it be not conclusive corroborative evidence. We allude to the increase in the number of steamboats; for, as the commerce upon the rivers increase, so must the tonnage increase, by which it is carried on. In 1834, the writer ascertained, from the lists kept at the Insurance offices, that the number of steamboats on the western rivers was two hundred and thirty. In 1840, from similar data, we reported the number to be four hundred and fifty. In 1842, the official reports to the government made them six hundred, and now at the

close of 1847, we assume the number to be eleven hundred. Now, it appears that in the six years, from 1834 to 1840, the annual increase was exactly sixteen per cent.; in the next two years, the yearly increase was seventeen per cent; and in the next period of five years it has been seventeen per cent. This coincidence is sufficiently striking for our present purpose, and indicates very fairly the growth of our country, and of its business. And we add here, that in our inquiries in regard to the growth of particular branches of business, in this city, made recently, with a view of ascertaining, approximately, the aggregate increase of business, we found that the average increase would be somewhere between fifteen and twenty per cent. per annum.

Assuming the figures, by which we estimated the annual value of our commerce in 1842, to have afforded a sufficiently close approximation to the truth at that time, we are prepared to bring our estimate down to the close of the year 1847, in the manner following:

The direct trade to New Orleans, which we then estimated at $50,000,000, is now, by the actual returns, $90,033,256.

The interior commerce floating from port to port, not including the above item, nor the imports from New Orleans and the eastern cities, was estimated, in 1842, at $70,000,000, to which we now add seventeen per cent. per annum, for five years, to bring it down to the close of 1847, and which gives for that item, $125,000,000.

The St. Louis report for 1847 gives, for the number of steamboats, one thousand one hundred and ninety, and estimates their tonnage at two hundred and ten tons each, and their cost at $65 per ton; making the whole value of the steamboat tonnage $16,188,561. We arrive at nearly

the same result, but by a different collocation of facts. We shall assume the whole number of steamboats on the Western rivers to be one thousand and one hundred, averaging one hundred and eighty tons each, and their value to be $80 per ton, making the whole value of the tonnage to be $16,280,000.

The imports from New Orleans and the Atlantic cities we set down, in 1842, at $100,000,000; and we now add seventeen per cent. per annum for five years, which will give us for this item, for 1847, $185,000,000.

From these data we state the value of the commerce floating on the western rivers to be, per annum, as follows:

Exports to New Orleans, - -	$90,033,256
Interior trade, - - -	125,000,000
Value of steamboat tonnage, - -	16,280,000
do " flat and keel do, - - -	525,000
	$231,838,256
Imports into the West, - - -	185,000,000
Total, - - -	$416,838,256

This amount is very much larger than the estimate of Col. Abert; but it is less than that of the St. Louis report, in which "the aggregate value of the commerce annually afloat upon the navigable waters of the valley of the Mississippi," is stated to be $432,651,240. If either of the calculations are faulty, the deficiency will be found to consist in its falling below the truth. But as both are but approximations, we consider them near enough for practical purposes, and have no hesitation in assuming the floating annual commerce of the West to be worth, in round numbers, $450,000,000.

We are happy to have our estimate of the value of the commerce of our rivers, corroborated by our friend

Edward D. Mansfield, Esq., one of the ablest and most accurate of western writers. In a memorial recently prepared to Congress, he supposes the whole value of the property shipped on the Mississippi, and branches, including western produce shipped to New Orleans, and to the Eastern cities, shipments from port to port within the West, and foreign merchandise, coin, bullion, and other articles received in exchange for our products, to be $500,000,000.

He gives, as the number of persons traveling as passengers on board steamboats, and exposed to the accidents of that mode of traveling, sixty-seven thousand five hundred each three days, which makes one hundred and fifty-seven thousand five hundred for a week, and eight million one hundred and eight-five thousand for a year. This is in addition to thirty-eight thousand of their crews, who are continually exposed.

We shall now proceed to set forth a few disconnected facts in relation to our commerce. The following interesting extract is from a report of T. J. Bigham, Esq., of Pittsburgh, to the Hon. Abbott Lawrence, chairman of the Executive Committee of the Chicago convention.

"*The steamboats belonging to, and built at, the port of Pittsburgh.*

"The collector of the port has furnished me the following statement from his books. The number of steamboats built and enrolled are as follows:

"In 1844,	44	steamboats.	Aggregate	tonnage,	7,034
1845,	45	"	"	"	5,851
1846,	53	"	"	"	8,394
1847,	55	"	"	"	9,353
	197				30,596

"The whole number of steamboats belonging to the

port of Pittsburgh, on the 1st of January, 1848, was one hundred and nine. The total tonnage of this port, on same day, was twenty-eight thousand tons. The cost of building and fitting out steamboats on the Western rivers averages about $80 per ton. Hence, the original cost of the tonnage of this port would be twenty-eight thousand tons at $80—equal to $2,240,000.

"*The trade of the Ohio river to this port.*

"This river is the great avenue which connects us with the consumers of our Pittsburgh manufactured articles throughout the valley of the Mississippi. Ours is the great workshop—almost every store in that valley contains less or more of our fabrics.

"The annexed schedule from the books of the wharf master shows, during the last five years, the number of steamboats and other arrivals. The aggregate annual tonnage, and the ratio of increase of each year:

Denomination of vessels.	Arrivals.	Tonnage.	Annual aggregate of Arrivals.	Annual aggregate of Tonnage.	Annual increase of Arrivals.	Annual increase of Tonnage.
1843						
Steamboats	1,707	165,317				
Keel and Flat	582	13,675	2,289	178,992		
1844						
Steamboats	1,966	216,236				
Keel and Flat	560	12,515	2,526	228,751	237	49,759
1845						
Steamboats	2,169	227,994				
Keel and Flat	624	14,180	2,793	242,174	267	13,443
1846						
Steamboats	2,585	276,572				
Keel and Flat	634	15,965	3,219	292,537	426	50,363
1847						
Steamboats	3,178	372,465				
Keel and Flat	764	20,730	3,942	393,195	723	100,658

Increase over 1843,	- - - -	28	per cent.
" " 1844,	- - -	6	"
" " 1845,	- - - -	21	"
" " 1846,	- - -	34	"

"Pittsburgh is, in every instance, the terminus of the voyage to steamboats reaching this port from the Ohio river. Hence the arrivals in the above table only show the cargoes brought to our wharf. The boat, on her departure, again takes a new cargo at least equal in amount. The steamboat tonnage, therefore, as shown in the above table, to represent fully the ascending and descending trade of the Ohio river, during the year 1844, should be just twice the amount. The wharf-master's report, moreover, is based on the custom house measurement of steamboats. The steamboats, trading to this port, will, on an average, carry one-half beyond their custom house measurement. I, however, only allow them one-third of an increase, and the account will then stand as follows:—

Steamboat arrivals,	3,178	tonnage,	372,465
" departures,	3,178	"	372,465
			744,930
Add one-third over custom house measurement,			248,310
Flat and keel boat arrivals 764,		tonnage,	20,730
			1,013,970

"This is the entire tonnage of the Ohio river landed at this port. About ten million bushels of coal from the Monongahela, and about seventy-five million feet of lumber from the Allegheny river, descending the Ohio annually, not included in the above statement."

The above extract relates to the trade of the Ohio river only. The writer then proceeds to set out the trade

carried on by the Allegheny river, the Monongahela, and the canal, and sums up the whole as follows:

"Tabular statement of the trade of Pittsburgh during the year 1847:

	Arrivals.	*Tonnage.*
From the Ohio, - -	3,178	1,013,970
" " Monongahela, -	1,500	55,000
" " Allegheny, - -	118	23,477
Steamboat arrivals, -	4,796	1,092,436
Flat and keelboat, - -	2,392	118,410
Pennsylvania canal boats, -	4,046	150,000
Total, - -	11,134	1,360,846

"This does not include the coal or lumber trade. The circular of the convention asked for a valuation to be fixed upon this tonnage. The returns made to me are not of such a character as would enable me to estimate the value of this tonnage.

"The number of individuals visiting this city during the past year can only be estimated with approximate accuracy. By the returns of the Monongahela navigation, we learn that that company has received toll upon

Through passengers, - - -		45,825
Way, - - - - - -		39,777
Total, - - - -		85,602
I estimate the travel by the Pennsylvania canal and turnpikes from interior of Pennsylvania,		
Through passengers, - - -	40,000	
Way, - - - - - -	30,000	
Total, - - -		70,000
From the iron and lumber region Allegheny river,		35,000
Travel by the Ohio river, being at the rate of 250 each way, or 500 per day, - - - -		182,500
Total, - - - -		373,102

"The amount of coal passing through the locks has has been as follows:

	Bushels.
1845 - - - - -	4,605,185
1846 - - - - -	7,778,911
1847 - - - - -	9,645,127

"An amount probably equal to one third has each year passed over the dams. This trade has more than doubled within the last two years.

"I would estimate that about one hundred millions of feet of lumber has this year descended the Allegheny river, and nearly one hundred millions of shingles. Probably about one-fourth of this amount was sold in our market, the remainder descended the Ohio river."

This is a good account, as far as it goes, of our dingy sister city; it would be an acceptable service to the public if the writer, or some other equally competent hand, would compile a more comprehensive statement, embracing the commerce, manufactures, and entire industry, of that prosperous place.

At Cincinnati the number of steamboat arrivals in 1847 was three thousand seven hundred and twenty-nine, and the departures the same, making the total of the arrivals and departures seven thousand four hundred and fifty-eight. The arrivals of keel and flatboats were three thousand three hundred and thirty-six, and the departures, seven hundred—in all, four thousand and thirty-six; the latter being estimated to carry seventy-five tons each.

We have no report from St. Louis, for 1847. The arrivals for 1846, as stated in their report already quoted, were two thousand four hundred and twelve steamboats, with four hundred and sixty-seven thousand eight hundred and twenty-four tons freight, and the departures being the

same, the whole annual steam tonnage is nine hundred and thirty-five thousand six hundred and forty-eight. The flatboat arrivals are stated to have been eight hundred and one, which at seventy-five tons each would give sixty thousand and seventy-five; the departures are not reported. The trips of the daily packet to Alton are not included. To arrive at something like a fair estimate for 1847, we add to these figures seventeen per cent. for the increase for that year; and we then arrive at the following result, for comparative tonnage of these three cities for 1847:

	Steamboats.	*Flat and Keel.*	*Tons.*
Pittsburgh,	6,356	764	1,013,970
St. Louis,	5,642	937	1,095,304
Cincinnati,	7,458	4,036	1,794,300

To these desultory facts we shall now add some comparative statements, to show the relative value of the commerce of the lakes and the western rivers.

According to the report of Col. Abert, the nett monied value of the commerce of the lakes and western rivers, including the passenger trade, amounted for the year 1846,

Of the lakes to - - -	$63,164,910
Of the western rivers to -	183,609,725
Aggregate, - -	$246,774,635

The population depending on the lakes and western rivers, as means of communicating with a market, was estimated, by the same authority, for the year 1846,

Of the lakes - - -	2,928,925
Of the western rivers - -	6,576,927
Aggregate, - -	9,504,952

The number of hands employed in the commerce as mariners, exclusive of shore hands, for the same year, was said to be,

For the lakes, - - -	6,972
For the rivers, - -	25,114
Aggregate, - -	32,086

According to the authority of Senate document, No. 44, second session, twenty-ninth Congress, the total amounts which have been appropriated and expended for lake harbors, and for improvements upon the western rivers, from the year 1806, when these improvements by the general government commenced, up to and including the last appropriations of 1845, have been

For the lake harbors, - -	$2,790,500
For the western rivers, - -	2,758,800
Aggregate, - -	$5,549,300

From this exhibit it appears that while the commerce of the western rivers is three times as great as that of the lakes—the population also bearing about the same relative proportion—the appropriations to the former have been a little larger than to the latter.

The discrepancy in regard to the amount expended relatively upon the foreign commerce of the United States, and that of the interior is still greater, for while upwards of $13,000,000 have been expended for light houses, buoys, beacons, piers and harbors on the Atlantic coast, the lakes and rivers, either class having a larger trade than the sea coast, have received but $2,500,000 each.

CHAPTER XIV.

Western cities.

After the view that we have given of the vast extent of the western plain, the great magnitude and variety of its resources, and the remarkable facilities for commercial intercourse afforded by its numerous rivers, it may be almost superfluous to remark that its business operations are valuable and widely ramified. Yet it is impossible to attempt any thing beyond general observations on this interesting subject, as the details would be too numerous to be crowded into a single volume. From the number of steamboats which we have shown to be in the employ of the mercantile community, some inference may be drawn, in relation to the magnitude of the capital invested; but any calculation, made from these data alone, would fall far short of the truth, and would afford an inadequate idea of the various resources of a country whose superficial limits are estimated by thousands of miles, whose population is counted by millions, and whose inhabitants are unsurpassed in industry, enterprise, and intelligence. The changes are so rapid as to mock any attempt to catch the features of the landscape, or to follow up the gigantic strides of moral and physical improvement.

Before we proceed to a brief account of our cities and larger towns, there a few reflections which occur to us as worthy of consideration.

The advantages and disadvantages of particular localities, their relative values, and the prospective growth of the towns founded upon them, or projected, afford subjects which have been much discussed, but which have baffled the sagacity of the most acute speculators. Town making has not generally proved profitable. Of the vast number of towns which have been founded, but a small minority have prospered, nor do we think that, as a general rule, the founders of these have been greatly enriched by their prosperity. It requires the united influence of many individuals and various interests, and the concurrence of a diversity of circumstances, to give impulse to the healthy growth of a town; so that while, on the one hand, it is almost impossible to forsee such a combination of events; on the other, it is essential to their occurrence, that the property which is to form their subject matter should first have passed from the few to the many.

From these and other causes, much of the *a priori* reasoning of those who have founded towns, and speculated in town lots, has proved fallacious, and while prosperous places of business have sprung up like mushroons—at points where such good luck was unforeseen even by those most interested. Some of the most promising schemes for the founding of large cities have proved utter failures.

We have in our eye a notable instance of this kind. At the junction of two noble rivers, upon a spot which, as presented upon the map, seems to combine every advantage, a city of noble dimensions has been laid out. An engineer of high reputation has been induced to give the sanction of his name to the scheme; plats beautifully executed have been circulated industriously, and immense sums of money are supposed to have been collected abroad,

for shares in this magnificent city, which, after being owned by several successive companies, and puffed for many years, is the residence only of frogs and musquitoes, while hundreds of towns and cities have grown up within the same period without effort.

The instances of the disastrous failure of this kind of speculation have been numerous; and they have occurred at points where the topographical indications—the local advantages, as they are usually termed—have seemed the most strongly developed.

The French, when the whole land was at their disposal, and their choice unlimited, founded Kaskaskia, Cahohia, Vincennes, St. Genevieve, Carondelet, and many other places, some of which are scarcely known as towns; while, on the other hand, Fort Du Quesne, Detroit, St. Louis and Natchez, have proved to be fortunate selections.

Chicago presents a most striking instance of rapid growth. Twenty years ago, it was a secluded military post, occupied by a small garrison, but little known, and very seldom visited except by the officers and agents of the government. The surrounding country was a wilderness. Within that time the whole site of the present city could have been bought for a sum which ten years afterwards would scarcely have paid for a single building lot in one of the more eligible situations for business. It is now a large city, handsome and well built, with a thriving, intelligent, enterprising population.

The important cities of the West are Pittsburgh, Cincinnati, Louisville, Nashville and St. Louis—yet there are fifty other towns, in a prosperous condition, which are considered as rivals of those we have named, by their inhabitants, who would doubtless feel indignant, at the exclusion of their names from the above list. But it is

not our object to draw comparisons; and as we are not writing a gazetteer, we cannot enumerate the various commercial points of this region, nor speak of the advantages of each.

The cities above mentioned are those of the first class, but a large number of towns are rising rapidly into importance, and already enjoying a liberal share of the trade of the West. We shall not enumerate these, as we could not do justice to all, and would be unwilling to give offence by omitting any which might be deserving of notice.

Nor do we include the cities of the lakes, whose trade and intercourse, flowing naturally through those inland seas into the New York canal, mingle but little with the commerce which forms the chief subject of this volume. Thirty-four years ago, the site now occupied by the beautiful city of Buffalo was a military encampment, white with tents, bristling with bayonets, and animated by martial music and the tramp of armed men. A solitary house, used as a hotel, was the only building standing upon the ground; a few blackened chimneys marked the places where others had stood. The village had been burned by British troops and their Indian allies, and the inhabitants driven out. The surrounding country was a wilderness. And now what a city is there! The writer saw that spot in its state of desolation, but has never visited it since.

In regard to Cleveland, our information, derived from personal inspection, is not much better, having paid but one short visit to that very attractive spot. The situation, on the lake shore, with a fine view of that noble expanse of water, is as beautiful as can be imagined, and there is a very decided exhibition of good taste in the plan of the city, its architecture, and improvements. As a place of

business the situation is commanding, and it must necessarily become a great emporium of wealth and commerce. Already its trade is vast, and its business connections widely extended.

Detroit, Milwauke, and Chicago are finely situated, and very flourishing cities. The first was one of the earliest French potss, and has been the scene of many events of historical interest; but the two last have sprung up within a few years. The growth of Chicago has been wonderful. All these are now fine cities, full of business, and not deficient in wealth.

We do not profess to treat in detail of the region of the lakes, or of the thriving and beautiful cities which now adorn the shores of those inland seas; for although they belong to the West, yet our work is confined chiefly to that part of it, the commerce of which flows through the Mississippi. Having received, however, a very concise and valuable report of the trade of Michigan, made by Messrs. J. R. Williams and D. A. Noble, to assist the general committee of the Chicago convention in preparing their memorial to Congress, which contains a great variety of useful information, we copy it from the Detroit Daily Advertiser. We could not in any other form exhibit the products and trade of that region in so few words.

Tonnage of Detroit.

Tonnage of 38 steamboats enrolled at the custom-house, Detroit, - - - -	10,941 50-95
Tonnage of 5 propellers enrolled at the custom-house, Detroit, - - - -	1,211 64-95
Total tons enrolled steam vessels, - -	12,153 24-95

Tonnage of 120 sail vessels enrolled at the custom-house Detroit,		15,809	73-95
Licensed,		750	
Total tons enrolled and licensed sail vessels,		16,559	73-95
Total tonnage belonging to Detroit district,		27,963	4-95
Tonnage of 8 steamboats building within Detroit district,	6,582		
Tonnage of 7 sail vessels,	600	7,182	
Total tons of all classes of enrolled and building ing vessels,		35,145	4-95
Total valuation of the same,		$1,757,250	
No. of men employed,		1,931	

American vessels entered and cleared from the port of Detroit.

Steamboats entered	822	Steamboats cleared	957
Propellers "	111	Propellers "	108
Brigs "	100	Brigs "	97
Schooners "	243	Schooners "	357
Sloops & barges "	597	Sloops & barges "	600
Total entries	1,873	Total clearances	2,119

American vessels entered and cleared, passing to other ports.

Entered,	1,857	Cleared,	1,822
British vessels entered,	238	British vessels cleared,	236
Total entries,	3,968	Total clearances,	4,177

Abstract of exports from the port of Detroit during the year 1847.

935 tons ashes,	$66,450	00
329 bbls. beef,	3,290	00
4,860 bush. cranberries,	4,860	00
614,707 bbls. flour,	3,073,535	00
8,286 bbls. fish,	49,716	00
23,916 lbs. ham,	2,391	60
5,795 120-1000 M feet lumber,	57,951	20
16,764 bush. oats,	4,191	00
1,582 bbls. pork,	18,984	00
749 638-1000 M staves,	10,486	00
203,055 bush. wheat,	203,055	00
760,616 lbs. wool,	167,335	52

659 chairs,	495 00
98,281 lbs. rags,	2,948 43
430 boxes candles,	2,687 50
210 " soap	525 00
122 bbls. oil,	2,562 00
79,938 lbs. furs,	40,895 20
183 packs deer-skin,	1,830 00
6,454 lbs. beeswax,	1,807 12
14,088 bush. corn,	5,635 20
648 bbls. grass-seed,	3,402 00
4,030 bbls. corn-meal.	10,075 00
50,571 lbs. butter,	5,057 10
144,657 lbs. hides,	7,232 85
29,118 lbs. lard,	2,038 26
18,229 lbs. leather,	2,822 00
2,452 M shingles,	6,130 00
844 bbls. beans,	2,532 00
1,608 casks highwines,	19,296 00
105 tubs,	105 00
613 pails,	128 60
464 bush. potatoes,	232 00
60,206 lbs. grind-stones,	301 03
89,500 lbs. starch,	4,475 00
1,151 bbls. whiskey,	8,632 50
960 rakes,	96 00
536 pork bbls.,	536 00
18,308 lbs. castings,	732 32
200 lbs. feathers,	50 00
40 bbls. buckwheat flour,	100 00
201 bush. peas,	201 00
14,898 brooms,	1,489 80
30,000 straw hats,	12,000 00
41 bbls. apples,	41 00
718 bush. dried apples,	502 60
298 bundles sheep pelts,	1,480 00
600 lbs. mustard seed,	60 60
6 bbls. flax seed,	18 00
10 tons of hay,	100 00
2,400 dozen eggs,	240 00

29 casks saleratus,	725 00
232 casks oil cake,	696 00
25,013 lbs. scrap iron,	250 00
85,929 lbs. merchandise,	8,592 90
8,348 lbs. peppermint oil,	15,272 00
200 hogs,	600 00
200 boxes glass,	400 00
9,000 bbls. beer,	45,000 00
5 bbls. clover seed,	45 00
Total,	$3,883,318 63

Imports at the port of Detroit for the year 1847.

31,609,698 lbs. merchandise,	$3,941,212 25
2,831 tons coal,	14,155 00
22,743 bbls. salt,	28,428 00
2,392 bbls. apples,	2,392 00
20 tons grind-stones,	1,954 00
328 tons plaster,	3,280 00
1,129 bbls. whiskey,	9,034 00
300 bbls. cider,	600 00
281 casks water-lime,	843 00
2,324 bags salt,	588 50
2,354 empty fish barrels,	1,177 00
632 bbls. pork,	6,320 00
116 bbls. dried fruit,	576 00
Total,	$4,020,559 75

Exports from the port of Monroe during the year 1847.

156,829 bbls. flour,	$784,145 00
222,596 bush. wheat,	222,596 00
2,973 bush. corn,	1,486 50
2,983 bush. oats,	765 75
180 bush. rye,	112 50
84 casks beans,	210 00
1,000 bbls. beef,	8,000 00
1,197 bbls. pork,	14,364 00
27,668 lbs. butter,	2,766 80
13,031 lbs. lard,	1,142 48
2,630 lbs. tallow,	263 00
420¼ tons ashes,	31,518 75

328	casks highwines,	3,936 00
414	bbls. cranberries,	1,242 00
182	bbls. timothy-seed,	819 00
153,400	lbs. wool,	33,748 00
25,800	lbs. rags,	774 00
2,400	straw hats,	480 00
20	packs furs,	2,000 00
252	bundles skins,	5,040 00
3,812	hides,	11,436 00
49	tons shorts,	245 00
128,529	lbs. furniture,	6,426 45
28,670	lbs. merchandise,	4,279 35
1,800	lbs. ginseng,	540 00
90	bbls. starch,	1,080 00
20	bbls. cider,	60 00
	Total,	$1,139,476 58

Imports at the port of Monroe in the year 1847.

5,975,627	lbs. merchandise,	$746,953 37
138,938	lbs. furniture,	6,946 90
471,599	lbs. iron and steel,	23,579 95
165,363	lbs. stoves and castings,	6,614 76
41,287	lbs. leather,	6,193 05
29,000	lbs. mill and grind-stones,	290 00
130	tons coal,	520 00
23	tons pig-iron,	690 00
	marble,	2,000 00
6,316	gallons stone-ware,	505 28
24	wagons,	1,440 00
3	threshing-machines,	750 00
112	bales oakum,	560 00
9,237	bbls. salt,	13,853 50
627	bbls. apples,	1,254 00
78,105	lbs. nails,	3,124 00
62	bbls. cider,	124 00
269	bbls. beer.	1,614 00
	Total,	$817,012 81

Exports at the port of Trenton during the year 1847.

1,600 cords fire-wood,	$1,600 00
312,000 feet lumber,	3,120 00
170 dry hides,	510 00
1,000 lbs. wool,	220 00
500 bbls. flour,	2,750 00
300 bush. barley,	100 00
500 bush. oats,	125 00
Total,	$8,425 00

Imports at the port of Trenton during the year 1847.

Merchandise,	$6,000 00

Exports from the port of Brest during the year 1847.

400 M feet black walnut,	$4,800 00
200 M W. I. staves,	3,600 00
25 M cubic feet oak timber,	3,600 00
Total,	$12,000 00

List of exports at St. Joseph, Michigan, in the year 1840.

135,843 bbls. flour,	$606,293 50
150,617 bush. wheat,	112,962 75
5,948 bush. corn,	1,843 88
1,970 bush. oats,	492 50
3,930 bbls. corn meal,	7,860 00
941 bbls. bulk, sundries,	1,882 00
2,058 bbls. pork,	24,696 00
3,177 casks highwines,	31,770 00
186 casks pot and pearl ashes,	3,255 00
20 casks linseed oil,	500 00
23 casks lard,	276 00
27 bbls. cranberries,	81 00
66 firkins butter,	660 00
481 bbls. peaches,	2,405 00
12 hhds. tobacco,	480 00
1,280 bush. potatoes,	320 00
1,150 lbs. maple sugar,	92 00
15,400 lbs. wool,	3,080 00
15 sacks rags,	120 00
250 empty bbls.,	250 00

723 dry hides,	2,349 75
59 packs furs,	2,360 00
226 tons pig iron,	6,780 00
159 ploughs,	1,033 50
1,355 M feet lumber,	9,483 00
470 M shingles,	1,175 00
8 M hoop poles,	48 00
15 M staves,	90 00
5,851 cords fire wood,	8,776 50
Supplies furnished vessels,	2,500 00
Total,	$833,917 38

Imports at the port of St. Joseph, Michigan, in the year 1847.

3,670,765 lbs. merchandise of all kinds,	$504,076 50
4,748 bbls. salt,	7,122 00
193 tons coal,	1,544 00
103 water lime,	309 00
801 bbls. household effects,	4,005 00
Total,	$517,056 50

Exports from the port of Grand Haven in the year 1847.

24,798,000 feet lumber,	$148,788 00
12,782 M shingles,	25,544 00
450 cords wood,	675 00
460 cords shingle bolts,	3,680 00
44 pine spars,	1,320 00
120 M feet squared timber,	6,200 00
220 M staves,	1,760 00
4,500 cedar posts,	270 00
330 cords hemlock bark,	1,650 00
4,000 bundles laths,	1,200 00
31 bbls. maple sugar,	775 00
53 packs furs,	8,000 00
17 tons pot ashes,	1,428 00
350 doz. pails,	1,050 00
5,800 bbls. flour,	29,000 00
25,400 bush. wheat,	22,225 00
140 bush. beans,	140 00
5 tons paper rags,	150 00
41 bbls. pork,	491 00

2,200 bbls. plaster,	3,300 00
1,600 lbs. wool,	480 00
300 smoked deer skins,	600 00
1,000 lbs. saleratus,	100 00
20,000 lbs. leather,	6,000 00
9 bbls. grass seed,	45 00
500 bush. potatoes,	187 00
Total,	$265,058 00

Imports at the port of Grand Haven, 1847.

Merchandise,	$180,000 00
Household effects and family implements,	40,000 00
Total,	$220,000 00

Exports from the Kalamazoo and Black rivers for the year 1847.

6,000,000 feet lumber,	$36,000 00
1,000,000 shingles,	2,000 00
500,000 staves,	2,000 00
1,000,000 lath,	2,000 00
100,000 feet timber,	700 00
1,150 cords wood,	1,437 00
400 cords bark,	1,600 00
4,000 bbls. flour,	18,000 00
150,000 leather—to Chicago and Milwaukee,	30,000 00
100 bbls. white fish,	500 00
Maple sugar, Indian goods, cranberries, furs, masts, &c.,	6,500 00
Total,	$100,737 50

Imports at the Kalamazoo and Black rivers for 1847.

Merchandise and hides, principally from Chicago and Milwaukee,	$60,000 00

Exports from all Ports and Landings between Grand Haven and Mackinaw, and from Little Bay de Noquet.

5,000,000 feet lumber,	$30,000 00
1,000,000 shingles,	2,000 00
10,000 cords wood,	15,750 00
furs and peltries,	10,500 00
Total,	$58,250 00

Imports at all Ports and Landings between Grand Haven and Mackinaw, and Little Bay de Noquet.

Merchandise, principally from Milwaukee and Chicago, $45,000 00

Exports from the port of Saginaw, in the year 1847.

98 pack of furs,	$9,800 00
1,000 bbls. fish,	4,500 00
6 packs smoked fur skins,	300 00
2,494 bush. corn,	935 00
74 bush. rye,	37 00
269 bush. cranberries,	273 75
22 mococks maple sugar,	88 00
500 bbls. flour,	2,500 00
18 bbls. pork,	186 00
1,159 M shingles,	2,318 00
3,500 M lumber,	24,616 00
2 tons pot ash,	150 00
Total,	$45,702 75

Imports at the Port of Saginaw in the year 1847.

15,000 lbs. merchandise,	$15,000 00
household effects and implements of agriculture,	3,000 00
	$18,000 00

Exports from Mackinaw and Ste. Marie during the year 1847.

22,500 bbls. fish,	$112,700 00
48,858 lbs. maple sugar,	3,000 00
14,200 cords wood,	32,000 00
furs,	12,524 00
1,784,805 lbs. copper ore,	178,200 00
Total,	$338,424 00

Imports at Mackinaw and Ste. Marie, 1847.

merchandise,	$275,000 00
6,000 bbls. salt,	10,000 00
Total,	$285,000 00

N. B.—Large importations are made from Detroit and other ports into the Copper regions, which do not appear in this statement.

Exports from Port Huron and Lexington in the year 1847.

13,000 M feet lumber,	$108,000 00
2,300 M lath,	6,900 00
5,000,000 feet saw logs,	25,000 00
7,000 M shingles,	14,000 00
300 cords shingle bolts,	1,500 00
500 all ft lumber,	4,000 00
Total,	$159,400 00

Imports at Port Huron and Lexington in the year 1847.

Merchandise of all grades,	$100,000 00

Exports from Port St. Clair during the year 1847.

6,650 M feet pine lumber,	$53,200 00
770 M shingles,	1,540 00
300 M lath,	900 00
leather,	2,000 00
tin, manufactures of,	300 00
6,000 lbs. wool,	1,380 00
	$59,320 00

Imports at Port of St. Clair in the year 1847.

Merchandise,	30,000 00

Exports from the Port of Newport during the year 1847.

1,145 M feet lumber,	$9,160 00
75 M lath,	375 00
2,041 cords fire wood,	3,061 50
furs and peltries,	1,000 00
leather,	600 00
10 tons pressed hay,	120 00
750 bush. oats,	187 50
75 bush. corn,	30 00
25 bbls. fish,	150 00
400 lbs. wool,	88 00
Total,	$14,772 00

Imports at the Port of Newport in the year 1847.

Merchandise,	$20,000 00

Exports from the Port of Algonac during the year 1847.

4,157 M feet of lumber,	$35,695 00
1,300 cords firewood,	1,625 00
Total,	$37,320 00

Imports at the Port of Algonac during the year 1847.

Merchandise,	$15,000 00

Exports from Mt. Clemens during the year 1847,

15,000 bbls. flour,	$75,000 00
2,000 bbls. corn meal,	4,200 00
3,000 bbls. corn,	1,200 00
3,200 bbls. oats,	800 00
425 casks pearl ashes,	12,750 00
300 brls. whisky,	1,800 00
30,000 lbs. wool,	7,500 00
10,000 lbs. butter,	1,100 00
2,194 boxes glass,	4.936 00
10,000 straw hats,	2,500 00
400,000 sawed staves,	10,000 00
1,450,000 rough staves,	20,300 00
980,000 feet pine lumber,	9,800 00
150,000 feet oak, white wood and ash lumber,	1,050 00
100,000 feet square timber,	600 00
2,000 cords wood,	2,000 00
20 brls. grass seed,	75 00
80 brls. apples,	100 00
800 patent pumps,	8,000 00
Total,	$163,711 00

Imports at Mt. Clemens during the year 1847.

1,210,000 lbs. merchandise,	121,000 00
800 bbls. salt,	1,400 00
400 bbls. plaster,	800 00
Total,	$123,200 00

Recapitulation.

	Exports.	Imports.
Detroit,	$3,883,318 63	$4,020,559 75
Monroe,	1,139,476 58	817,012 81
Trenton,	8,425 00	6,000 00
Brest,	12,000 00	
St. Joseph,	833,917 38	517,056 50
Grand Haven,	265,058 00	220,000 00
Kalamazoo and Black Rivers,	100,737 50	60,000 00
Ports north of Grand Haven,	58,250 00	45,000 00
Saginaw,	45,702 75	18,000 00
Mackinaw and Ste. Marie,	338,424 00	285,000 00
Port Huron and Lexington,	159,400 00	100,000 00
St. Clair,	59,320 00	30,000 00
Newport,	14,772 00	20,000 00
Algonac,	37,320 00	15,000 00
Mt. Clemens,	163,711 00	123,200 00
	$7,110,832 84	$6,276,829 06

Iron and stock imported for the railroads; specie of emigrants, and valuable goods and property brought in as baggage, and by express, 1,000,000 00

$7,276,829 06

Exports,	$7,119,832 84
Imports,	7,276,829 06
Aggregate commerce,	$14,396,661 90

Value and Quantities of Exports of the Products of Michigan, exported from the State for the year 1847.

	Quantities.	Value.
Flour,	933,179 bbls.	$4,591,223 00
Wheat,	601,668 bush.	559,838 75
Corn meal,	10,060 bbls.	22,135 00
Corn, oats, rye and barley,	55,300 bush.	17,950 00
Copper ore,	1,783,805 lbs.	178,200 00
Lumber,	73,842,000 feet	520,864 00
Shingles,	26,633,000	55,707 00
Staves, timber, lath, spars, &c.,		125,000 00

	Quantities.	Value.
Wood,	43,042 cords	69,463 00
Patent pumps,	800	8,000 00
Wool,	968,416 lbs.	213,851 50
Furs,	241,015 lbs.	92,119 20
Leather,	225,562 lbs.	41,422 90
Hides,	426,957 lbs.	21,528 60
Ashes—pots and pearls,	1,625 tons	128,301 75
Fish,	31,911 bbls.	172,066 00
Pork,	4,896 bbls.	58,721 00
Beef,	1,329 bbls.	11,290 00
High wines and whiskey,	6,564 casks	65,434 00
Beer,	9,000 casks	45,000 00
Peppermint oil,	8,348 lbs.	15,272 00
Straw hats,	42,898	14,980 00
Butter,	94,839 lbs.	9,583 90
Starch, glass, lard, linseed oil, grass seed, plaster, and all other artices,		81,881 24
Total,		$7,119,832 84

CHAPTER XV.

Western cities—manufactures.

Pittsburgh and Cincinnati are the most important manufacturing towns. At these places, chiefly, steamboats are built, and engines made for a variety of purposes. Some idea of the vast amount of machinery manufactured at those points may be formed from the facts, that steam mills for grinding wheat are now becoming scattered over the whole West—that steam machinery is used very generally in the preparation of cotton and sugar—and that it is rapidly taking the place of water and horse power, in various branches of manufacture. At these places are also made almost all the heavy articles which are fabricated from iron. From their work shops the vast regions, which include a dozen states, are supplied with wagons, carts, ploughs, harness, and all farming implements—with chairs and cabinet work of every description—with tin ware—with printing presses and types—with saddlery, shoes, and hats—with a large amount of books—and with a variety of other articles.

In the states of Kentucky, Tennessee, and Missouri, but little is manufactured, because the slaves, who are the only laborers, do not possess the kind of ingenuity necessary to make them valuable mechanics. In Kentucky there are manufactories of hempen bagging, tobacco, and whisky, and in Tennessee are valuable iron works. Fur

ther south the industry of the several states is almost entirely devoted to the production of cotton and sugar; and the vast supplies of manufactured articles needed for a wealthy, energetic and highly refined community are drawn from more northern latitudes. They import all their machinery, their tools, their furniture, and a large portion of all they wear or eat. Of these immense supplies Pittsburgh and Cincinnati furnish the greater portion—but not the whole. The country lying around the head of the Ohio, of which Pittsburgh may be considered as the centre, and the commercial metropolis, possesses an incalculable amount of the facilities for manufacturing, such as timber, coal, water power, and raw materials, while it occupies a commanding position at the head of navigation. Brownsville, Williamsport, Elizabethtown, Economy, Beaver, Steubenville, and a number of other towns, are actively engaged in manufactures, and contribute to the wealth of Pittsburgh.

As we descend the Ohio, the country becomes more fertile, and its agricultural products abundant. Wheeling, like Pittsburgh, derives its business, partly from manufactures, partly from transportation of merchandise from the eastern cities to the west, and partly from commerce. Being the point at which the national turnpike intersects the Ohio river, much of its importance is derived from the daily arrival of passengers by stages and steamboats.

The average number of stage coaches arriving and departing daily, at Wheeling, are as follows:—

Going eastward daily,	7
Returning from the east,	7
Going westward daily,	3
Returning from the west,	3
Going north and north west,	3
Returning from north and north west,	3

The average number of passengers, carried by those stages throughout the year, is six and a half per stage.

The total number of stages arriving and departing daily, is twenty-four.

The total number of passengers is one hundred and thirty-six per day, or forty-nine thousand six hundred and forty per year.

The number of steamboats arriving daily, in the year 1847, was seven, and the departures the same.

Total arrivals in 1847, - - -	2,555
" departures in 1847, - - -	2,555

The average tonnage of these boats is estimated at one hundred and eighty-two tons, and the aggregate tonnage, for the year, four hundred and sixty-five thousand tons each way.

The amount of coal shipped from Wheeling, in 1847, was two million nine hundred thousand bushels. The coal is not of the best quality, but is sufficiently good for ordinary purposes, and furnishes important facilities for manufacturing at this place. Wheeling is consequently a manufacturing town of some note, employing forty-seven steam engines, and nearly three thousand operatives.

Between Wheeling and Cincinnati the towns, such as Maysville, Portsmouth and Marietta, are more engaged in the shipment of produce than in mechanical employments, although at all those places, and many others on the rivers, there are manufactories which contribute to swell the great aggregate of our creative industry.

At Pomeroy, a village in Ohio, are the mines from which Cincinnati and other places on the river are supplied with their best coal. For family use this is the finest article for fuel that comes to our market, where it is

sold in large quantities, at an average of about ten cents per bushel.

Louisville, Nashville, and St. Louis, have no manufactures worthy of being mentioned in comparison with those of Pittsburgh and Cincinnati; but this remark is not made invidiously, or as affording any ground for the inference, which casual observers have often drawn, that the former cities possess less wealth or enterprise. It shows simply that their industry is directed in different channels. They are altogether commercial, and their wealth is employed in the interchange of the various commodities which enter into the traffic of this vast region—chiefly in the importation of merchandise from New Orleans, and the eastern cities, and the shipment of western produce to the southern and Atlantic markets.

It is a question often discussed, and which we shall not attempt to settle, which of these cities is pre-eminent in wealth and business. The dispute is unprofitable, and it is to be hoped that it may remain undecided; for there is no sober or practical view of the question in which they can be considered as rivals. Neither of them can by its growth overshadow another, or drain its resources. Separated by wide tracts of country, and each the centre of a vast circle, daily augmenting in population, we can scarcely imagine any series of events which can change the relations of these cities, to the whole country, or to each each other. Rapidly as they are advancing, their growth bears no proportion to that which must take place in the regions around them, of which they are respectively the marts; and smaller places of business are becoming established, to supply the wants of the country—but still tributary to the larger cities, which form the arterial

channels of our commerce, and whose prosperity is equally essential to the whole country, and to each other.

St. Louis is one of the oldest places in the West, having been settled by the French in 1763.* Peirre Choteau, and other Frenchmen, were very successful in conciliating the confidence of the Indians, and extended the barter of merchandise for furs and peltry, throughout the most of the Western tribes. The whole of the Indian trade of the country lying upon the Mississippi and its tributaries, centered at that point; at which was also the depot for all the military posts on the Western frontier, and the head-quarters for most of the officers and agents of the government having transactions in the far West. The lead mines in Missouri, and the inexhaustable beds of that mineral more recently discovered in Illinois, and Wisconsin, render this the principal market for that article, of which immense quantities are annually exported. Wheat, corn, pork, tobacco, and hemp, are largely produced in the vast region of fertile land, lying around, of which St. Louis is, and must ever be, the emporium.

St. Louis has, therefore, always been a place of great resort, and of remarkable activity in business; and its geographical position seems to insure for it a continuance of that pre-eminence. Its central position in relation to New Orleans on the one hand, and the vast expanse of country drained by the Missouri, the Mississippi, and the Illinois, on the other, gives it natural advantages, as a commercial

*I take this occasion to refer the reader to an excellent account of St. Louis, in the Illinois Monthly Magazine, for April 1832, and May 1832, written by Wilson Primm, Esq., of that city, and transferred by me into the "Sketches of the West," and also to an address by him at the celebration of the Anniversary of the founding of St. Louis, on the 15th February, 1847.

place, which are unrivaled, and these advantages are well appreciated and improved by a sound and enterprising population. St. Louis holds the same rank in respect to the region of the Upper Mississippi, that Cincinnati occupies in relation to that of the Ohio—each of them is the mart and commercial metropolis of a wide area, in which they are each unrivaled.

We have before us a valuable report, "prepared by authority of the delegates from the city of St. Louis, for the use of Chicago convention of July 5, 1847," from which we select the following passages.

"At the first census (1790) the population of the valley of the Mississippi did not exceed two hundred thousand. In 1800, it had increased to about five hundred and sixty thousand; in 1810, to one million three hundred and seventy thousand; in 1820, to two millions five hundred and eighty thousand; in 1830, to four millions one hundred and ninety thousand; in 1840, to six millions three hundred and seventy thousand; and in 1847, according to the preceding average ratio of increase, it exceeds ten millions five hundred and twenty thousand. In the year 1850, according to such ratio, it will exceed twelve millions, and be about equal to the population of all the Atlantic states.

"The history of Missouri alone, however, exhibits a still more extraordinary increase. In 1771, the population was seven hundred and forty-three; in 1799, it was six thousand and five; in 1810, it was twenty thousand eight hundred and forty-five; in 1820, it was sixty-six thousand five hundred and eighty-six; in 1830, it was one hundred and forty thousand four hundred and fifty-five; in 1840, it was three hundred and eighty-three thousand seven hundred and two; and according to the same ratio of increase, (one hundred and seventy-three per cent.

decennially,) it is, in 1847, eight hundred and twenty-five thousand and seventy-four, being an increase of over sixteen per cent. per annum. But while the decennial increase of Missouri was one hundred and seventy-three per cent., that of Illinois was two hundred and two, Mississippi, one hundred and seventy-five, Michigan, five hundred and fifty-five, and Arkansas, two hundred and twenty-one per cent.

"The commerce and agriculture of this valley exhibit a growth as surprising as that of its population.

"The first schooner of the northern lakes, 'the Griffin,' in 1679, was freighted with the first combination of commercial enterprise and settlement that reached the valley of the Mississippi. Thus the rivers of the valley owe to the great lakes the introduction of commerce and population.

"From that period up to the purchase of Louisiana in 1803, and even later, the fur trade of the French emigrants with the Indians constituted a leading pursuit of the inhabitants, especially of the upper half of the valley of the Mississippi. These immense rivers and lakes were navigated from Quebec, on the St. Lawrence, to the Yellow Stone, on the Missouri, by bark canoes, and the Fox and Wisconsin rivers, connecting the lakes with the Missippi, were a chief thoroughfare of the trade.

"Next to the canoe came the Mackinaw boat, carrying fifteen hundred weight to three tons, and then the keel boat or barge of thirty to forty tons. The first appearance of the keel boat in the Mississippi, above the mouth of the Ohio, of which we have any account, was in 1751, when a fleet of boats, commanded by Bossu, a captain of French marines, ascended as far as Fort Chartres. This enterprise, also, was the first to ascertain, by experience, some-

thing of the nature of the navigation of the Mississippi. One of the boats, 'the St. Louis,' struck a sandbar above the mouth of the Ohio, was unladen and detained two days. Three days after, says the traveler, 'my boat ran against a tree, of which the Mississippi is full; the shock burst the boat, and such a quantity of water got in it that it sunk in less than an hour's time.' This was probably the first boat snagged on the Mississippi. From three to four months was the time consumed at this period, and for many years afterward, in a voyage from New Orleans to the settlements in the vicinity of St. Louis; a voyage occupying a steamboat, in 1819, twenty-seven days! but which of late has been accomplished in less than four days!

"The city of St. Louis is the base of the navigation of all the Upper Mississippi and its tributaries, and the head of navigation for the larger boats from the Ohio and Lower Mississippi. Here is concentrated all the trade of the Upper Mississippi, the Missouri, and the Illinois rivers, and a large portion of that of the Ohio, and the Lower Mississippi. Hence is exhibited as busy and as crowded a wharf as can any where be seen, upon which are commingled people of many nations, and products of every clime, and every species of industry. The city was built upon a limestone bluff, of moderate elevation, fronting on the Mississippi, whose water washed its base with a convenient depth. From the condition of a fur trader's post, it has grown to the quality of a city, promising soon to be of the first class. From a mere boat load of traders, its population has gone on multiplying until it has reached the number of fifty thousand. From a trade of a few thousand dollars in furs and peltries, a commere has arisen which counts its millions. It has grown to be the greatest

steamboat port, next to New Orleans, in the world.* Its enrolled and licensed tonnage was, in

1844	16,664
1845	20,424
1846	23,800

at $65 per ton, its tonnage, for 1846, was worth $1,547,000.

"But this tonnage of its own is not all that is required by its trade. The total number of steamboat arrivals at St. Louis, was,

In	1839,	1,476	with	213,193 tons.
"	1840,	1,721	"	244,185 "
"	1841,	2,105	"	371,691 "
"	1842,	2,412	"	467,824 "

"Besides eight hundred and one flatboats, and is exclusive of the daily packets to Alton. During the month of May, 1846, there were twelve steamboat arrivals per day.

"The following table of the imports to St. Louis, during the years named, is but an approximation to the actual truth, as many articles of great value, such as dry goods, hardware, cutlery, specie, bullion, fancy articles, furniture, machinery, farming implements, leather, army and Indian supplies, wool, castor oil, hay, horses, mules, cattle, hogs and sheep, &c., &c., are omitted.

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*The writer no doubt believed this statement to be true, but its fallacy will be apparent from a comparison of the steamboat arrivals and departures in 1847 which we have stated in another place from authentic data, that of St. Louis being taken from his own report:

Cincinnati,	7,458
Pittsburgh,	6,356
St. Louis,	5,642

Table of imports into St. Louis, for the years 1844, 1845, *and* 1846:

	1844.	1845.	1846.
Apples—Green, bbls.	7,233	6,314	3,728
Dried do	1,892	2,989	3,255
do sacks,	2,388	2,147	2,768
Beef—bbls.	4,280	5,264	17,116
half bbls.	63	99	169
Bacon—casks,	19,225	6,180	11,803
boxes,	484	149	618
bulk, lbs.,	89,725	94,274	207,446
Butter—bbls.	618	558	823
kegs and firkins,	3,099	3,424	3,940
Beeswax—bbls.,	337	319	476
boxes and sacks,	837	631	646
Bagging—pieces,	3,120	4,217	3,243
Beans—bbls.,	1,518	2,091	4,370
sacks,	389	1,320	2,199
Barley—bushels,	8,478	32,231	20,277
Buffalo robes,	33,670	14,475	16,717
Corn—bushels,	56,720	107,927	688,644
Castings—tons,	937	1,590	1,604
Cheese—casks,	550	221	430
boxes,	9,337	8,822	11,232
Cider—bbls.,	711	763	421
Coffee—sacks,	38,731	46,204	65,128
Cotton yarn—packages,	5,354	10,756	13,260
Flour—bbls.,	88,881	139,282	220,457
half bbls.,	530	563	1,059
Furs—packages,	973	2,555	3,011
Feathers—sacks,	471	816	768
Flaxseed—bbls.,	2,741	2,136	3,693
Ginseng—bbls.,	75	20	19
sacks,	34	63	58
Glass—boxes,	4,697	23,563	24,630
Hemp—bales,	59,292	30,997	33,853
Hides,	55,572	70,102	63,396
Iron, bar—ton,	1,981	2,282	2,484
Pig do	1,469	1,480	2,326
Lead—pigs,	595,012	750,879	730,820

	1844.	1845.	1846.
Lead—bars—lbs.,	19,300	88,650	7,621
Lard—bbls.,	12,293	7,652	26,462
kegs,	12,949	6,659	14,734
Liquor—Whisky—bbls.,	24,510	29,798	29,882
Brandy do	1,477	1,886	1,698
Wine do	2,611	3,600	3,084
Lead—white—kegs,	5,256	3,466	1,526
Molasses—bbls.,	3,270	11,788	14,996
Nails—kegs,	23,703	21,587	28,073
Oils—Linseed—bbls.,	140	695	826
Castor do	106	78	95
Lard do	867	284	292
Onions—bbls.,	1,449	217	463
sacks,	2,351	1,893	4,752
Oakum—bales,	681	1,104	1,378
Oats—bushels,	16,480	16,112	95,612
Pork—bbls.,	29,945	15,702	48,981
half bbls.,	73	89	39
bulk lbs.,	136,333	261,754	630,765
Peaches—green—bbls.,	382	735	420
dried do	356	1,000	1,210
do sacks,	445	826	295
Potatoes—bbls.,	3,815	2,449	3,625
sacks	21,272	12,045	26,979
Peltries—packages,	540	917	1,266
Rice—tierces,	670	869	916
bbls.,	103	34	
Rye—bushels,	61	3,054	5,283
Rope—hemp—coils,	12,525	8,890	5,122
Shot—kegs,	28		462
bags,	88	2,112	1,026
Skins,	32,859	25,205	23,872
Salt—domestic—bbls.,	27,736	21,157	58,948
Liverpool—sacks,	112,507	99,272	169,373
Turk's Island—bags,	11,727	13,412	8,391
Sugar—hhds.,	9,070	10,259	11,603
bbls.,	1,912	3,721	4,400
Havana—boxes,	1,630	516	1,352

	1844.	1845.	1846.
Tallow—casks, - -	32	75	303
bbls., - -	810	688	1,114
Tar—bbls., - -	528	1,630	1,558
kegs, - - -	2,011	4,128	5,776
Tobacco—hhds., - -	9,707	11,564	8,588
manufactured—boxes,	7,380	7,777	7,903
Tea—chests, - - -	1,361	434	2,091
half chests, - -	879	1,652	1,963
Vinegar—bbls., - -	1,373	1,032	1,086
Wheat—bushels, - -	720,663	971,025	1,838,926

"The following table embraces imports, to the city, of wood and lumber, for the years

	1845.	1846.
Cords of wood,	22.646	29,476
Lumber, feet,	10,389,332	13,169,322
Shingles, M,	13,927,500	10,652,000
Cooper stuff,	41,700	966,963
Posts,	5,263	6,997
Laths,	2,328,700	1,807,700

"During the present year, (1847,) the business of the city has materially increased. In the articles of flour and wheat the increase has been nearly one hundred per cent. both in quality and value. The money value of nearly all agricultural products, has greatly increased, and the quantity put in motion has been, in respnct to most of the articles exported, augmented in about the same proportion.

"The Mississippi river takes its rise in latitude 48° north, and discharges its waters into the Gulf of Mexico in latitude 29° 5′. It flows through a channel three thousand miles long. Its course is south, nearly 14° east. Its width averages about half a mile. Its width does not increase with the volume of water, but is about the same at Galena, one thousand six hundred miles above the mouth, as at New Orleans, where the volume is six times

as great. It is six hundred and forty-five yards wide at Vidalia, Louisiana. It drains an area of three hundred thousand square miles. Its mean velocity at the surface, for the year, opposite Vidalia, is 1.88 miles per hour. (Opposite St. Louis its velocity is about three miles per hour.) Its mean depth, per annum, across the entire channel, at the same place, (Vidalia,) is about sixty feet. The mean velocity is reduced about fifteen per cent. by friction against the bottom. The total amount of water discharged, per annum, in cubic feet, is 8,092,118,940,000. —*Prof. Forshey.*

"The Missouri river rises within one mile of the head waters of the great river of the Oregon. It opens the 'gates of the Rocky Mountains,' at a point four hundred and eleven miles above the head of its navigation. The following are some of its principal tributaries, each navigable from one hundred to eight hundred miles:—

Yellowstone River,	-	800	yards	wide	at its mouth.
Chienne,	" -	400	"		"
White,	" -	300	"		"
Big Sioux,	" -	110	"		"
Platte,	" -	600	"		"
Kanzas,	" -	233	"		"
Grand,	" -	190	"		"
La Mine,	" -	70	"		"
Osage,	" -	397	"		"
Gasconade,	" -	—	"		"

"The length of the Missouri, from its source to its mouth, is three thousand and ninety-six miles, and no substantial obstruction impedes its navigation from its mouth to the falls, two thousand miles. Considering the Missouri as one river from its sources to the Gulf of Mexico, it is the longest in the world. Its average rapidity is nearly twice that of the Mississippi, as the average level

of its valley is nearly twice more elevated than that of the Mississippi. The first year a steamboat navigated the Missouri was 1819. The following is an exhibit of the number of steamboats engaged in the trade of that river from 1838 to 1846:—

Year.	*Number of Boats.*	*Number of Trips.*
1838,	17	96
1839,	35	141
1840,	28	147
1841,	32	162
1842,	29	188
1843,	26	205
1845, arrivals at St. Louis from the Missouri,		249
1846, " " "		256

"The Santa Fe trade, and the fur and Indian trade, as well as the domestic commerce of that river, are very important and extensive, and there are those who anticipate the period when that stream will be made a great artery of the trade between the United States and China and the East Indies. The trade between St. Louis and Santa Fe is estimated at $500,000 per annum. The fur trade of St. Louis is valued at $300,000 per annum.

"The total annual commerce of St. Louis, imports and exports included, although yet in its infancy, is estimated at over $75,000,000,* equalling nearly one-third of the whole foreign commerce of the United States.

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*This sum may seem too large; but of the innumerable articles of trade, take flour and wheat as one example:—

1846,	Barrels of flour manufactured in the city,	223,500
"	Barrels of flour imported	221,086
	Total, barrels flour,	444,586

The income of the city per annum is,	$275,000
Taxable property for 1845, -	13,607,000
" " " 1846, - -	14,544,238
" " " 1847, -	16,665,142

"Amount of duties paid to the United States at the St. Louis custom house, the current year, $50,000.

"The United States arsenal is beautifully situated at the lower end of the city, and consists of stone buildings and walls of great value and durability. Jefferson Barracks, eight miles below, constantly occupied by more or less troops of the United States, and capable of accommodating two regiments, is considered one of the most eligible stations in the valley of the Mississippi. Both the arsenal

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Worth $5 per barrel, - - - -	$2,222,930
Bushels of wheat imported, 1,838,926, worth $1 per bushel, - - - -	1,838,926

Total value of the flour and wheat of St. Louis, 1846, $4,061,856

And, as this does not include the quantities brought to the city in wagons, the estimate is below the fact, and still much below the business of 1847.

Yet, so many will be still disposed to doubt the estimate, that, rather than reduce a single figure, we will offer one method of demonstrating its truth.

We have shown that the average tonnage of steamboats trading at St. Louis is two hundred and ten tons per boat—that there are two thousand four hundred and twelve arrivals per annum of steamboats, and eight hundred arrivals of flatboats. The flatboats we will average at the low rate of fifty tons each.

2412x210=	506,520
800x 50=	40,000
Total tons,	546,520

Now, what is the value of a ton? Take, for the purpose of deriving an average, say eleven of our principal articles of trade,

and the barracks have been of great and indispensable service to the government in the present war. The two comprise a value in government property of $1,750,000, and permanent and valuable improvements are still going on. In consequence of the favorableness of the position, the cheapness of manufacture, and the facility of communication in every direction, the government has had very large supplies manufactured here; much larger, probably, than at any other arsenal in the United States. At the conclusion of the existing war, enormous quantities of government stores will be turned in upon the Mississippi; most of which will come to this arsenal for repairs and storage. The increasing demands upon it have constrained the officer in charge already to report the shops, laboratories and magazines as too small for the public wants. Since the commencement of the Mexican

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yet of the lowest value per ton. For example: hay is worth $20; tobacco $90; lead $75; hemp $75; flour $65; corn $22; wheat $44; oats $22; pork $130; bacon $130; beef $88—average value per ton, $68. Most other articles of import and export are worth more. Let us then multiply our average value of a ton by the number of tons, 546,520x68=$37,103,360. But these are articles of export. Our imports must be equivalent. The sum must, therefore, be doubled. We have, then, $74,206,720, as the value of our imports and exports *by boats*. There are $2,000,000 of specie and bullion to be added. There are vast amounts arriving and departing by wagons; many rafts of lumber; one million three hundred and thirty-five thousand eight hundred and seventy-three bushels of coal, and many other items to be added, increasing, rather than reducing our estimate. The tables of imports, derived from the Harbor Master's register, are very imperfect, and fall very far short of the truth. For example: The number of buffalo robes received in 1846, are put down at sixteen thousand seven hundred and seventeen, while we are assured, by the best authority, that the number was as high as sixty thousand.

war, there have been manufactured at this arsenal, gunpowder munitions and other ordnance stores to the amount of about one thousand one hundred and fifty tons, costing several millions of dollars, and sent up and down the Missouri and the Mississippi; between four hundred and five hundred tons of shells and shot; about seven millions of cartridges for small arms, of which two millions five hundred thousand were made in the single month of April, besides enormous quantities of artillery munitions, giving employment for considerable times together to five hundred to six hundred hands. The unequaled advantages of this city, as a military position, have been fully demonstrated during the present war.

Besides, the city of St. Louis is a port of entry; the seat of a United States custom-house; of a United States subtreasury; of a United States land office; of a United States superintendency of Indian affairs; of a United States surveyor general's office; of a United States arsenal; a landing place for a military barracks; the head-quarters of a United States military division, and the point from which the United States military posts of the Upper Mississippi and Missouri are garrisoned and supplied. Indeed, it is difficult to comprehend the extent of the vast interests of the government and people here co-mingled. And as the territory and population, commerce and navigation, of the country are increasing, almost beyond the ability of the imagination to keep pace with them, this point is daily, *pari passu*, advancing in importance, as the commercial centre, the seat of concentrated capital, talent, skill and enterprise.

Louisville was one of the earliest settlements on the Ohio, and was rendered the more important at that time by its position, at the falls of Ohio, that obstruction

causing necessarily the landing of all boats passing up or down the river, and the transit of all freight and passengers by a portage of two miles overland. The periods during which the rapids may be passed by boats are confined in a few days at a time,—occasionally a few weeks—in the spring and winter—periods so brief, and occurring so seldom, as to form scarcely an exception.

The construction of a canal round the falls has not, in my opinion, materially affected the prosperity of Louisville, in this respect, as the detention occasioned by passing through it must still make Louisville a stopping place for all steamboats, and this would seem to be the chief advantage derived from the circumstance. In this we may be mistaken; but we have always supposed that the people of Louisville overrated the advantage of this great natural impediment to navigation, and in consequence, undervalued more important considerations connected with their local position, and neglected to improve resources that, properly cultivated, must unquestionably have led to prosperity. Experience has shown that the most efficient element of the sustenance of a town is a rich surrounding country. A populous, or a very extensive region, abounding in natural resources, having but one principal market, will inevitably build up, at the place of that market, a town whose prosperity, as a general rule, will be in proportion to that of the country itself. Such is most emphatically the case with Cincinnati and St. Louis, the centre each of a vast agricultural area; and of Pittsburgh having great resources in coal and iron, and a boundless outlet for the fabrics of her workshops. And such too is the case with Louisville, the natural depot for some of the finest counties of Kentucky, and for a portion of Indiana. St. Louis has the advantage of long rivers, stretching and spreading

out, through a widely extended surface of country; while Cincinnati, in addition to her natural advantages of river navigation, has constructed artificial highways penetrating the region around her in every direction, and drawing within her influence the rich tribute of its agricultural surplus. Had Louisville, with similar forecast, penetrated the interior of Kentucky with turnpikes and railroads, she would have attracted to herself a vastly increased amount of business; and the country, already rich, abundant in resources, and inferior to none in the industry and energy of its population, would have been stimulated, by these facilities for exportation, to a greatly increased production. Eventually these results will probably take place. Kentucky, as a state, has the advantage of being out of debt, and in high credit, and has therefore ample means for carrying out a system of internal improvement on a scale worthy of a commonwealth so rich in resources and in patriotism. The examples of Pennsylvania, Ohio, and Indiana, will not be lost upon her. She will awake to the importance of opening the channels of commerce, bringing the market to the door of the farmer, and placing her commercial towns in free competition with those of other states. Under such auspicies, Louisville could not fail to regain the standing which she has heretofore held, and from which she has within a few years past—temporarily, as we suppose—receded.

Louisville is surrounded by a very beautiful tract of fertile land, which is well cultivated, and some of it highly improved. It has an abundant banking capital; the Bank of Kentucky, the Bank of Louisville, and a branch of the Northern Bank of Kentucky, all sound and well managed institutions, being located here. The canal furnishes a large amount of water power, which has not yet invited

the attention of capitalists, but which, combined as it is with many other valuable facilities for manfacturing, must some day become attractive.

We have not been able to procure any authentic account of the steamboat arrivals and departures at Louisville, or other business statistics, which would afford data for a comparison between that and other Western cities. We are advised that "this prosperous city keeps no account of its business;" and we regret that such is the case, as an exhibit could not fail to be creditable to its business and prospects. A friend has kindly furnished, "from individual sources" the following items of merchandise received and sold at Louisville in 1847, which does not include any goods received for the purpose of being forwarded to other places:

Sugar—hhds.,	9,320
Molasses—bbls.,	10,220
Coffee—bags,	37,125
Cotton—bales,	5,620
Tobacco—hhds.,	6,650
Bagging—pieces, in 8 months,	44,700
Bale rope—pieces, in 8 months,	27,400

CHAPTER XVI.

Cincinnati in 1836.

In selecting a few facts in relation to the business of Cincinnati, for the purpose of illustrating the general subject before us, it is not intended to give prominence to this city in preference to the others. We collect our facts here because this is the place of our residence, and the data are more readily obtained than similar details respecting distant places; nor can we discharge this part of our task better than by extracting the following remarks from an interesting article written for the Western Monthly Magazine, by our lamented friend, Benjamin Drake, Esquire, formerly of this city, a most amiable and excellent man, who, during a brief but useful life, devoted a liberal portion of his time and talents to the advancements of the interests and the elevation of the character of Cincinnati. He was an able and agreeable writer, whose pen was always at the service of the public, and whose public spirit was surpassed only by his pure and elevated morality.

"Cincinnati is built upon an elevated and beautiful plane, on the north bank of the Ohio river, in latitude 39° 6′ 30″. From the junction of the Alleghany and Monongahela rivers, following the meanders of the Ohio, it is distant four hundred and fifty-five miles, and from the union of the Ohio and Mississippi, five hundred and four

miles. Over land it is distant from Columbus, the capital of the state, one hundred and ten miles; from Sandusky City, two hundred miles; from Indianapolis, one hundred and twenty miles; from Frankfort, eighty-five miles; from Nashville, two hundred and seventy miles; from Natchez, six hundred and eighty miles; from New Orleans, eight hundred and sixty miles; from St. Louis, three hundred and fifty miles; from Louisville, one hundred and five miles; from Baltimore, five hundred and eighteen miles; from Philadelphia, six hundred and seventeen miles; from Washington City, five hundred miles; from New York, by the way of lake Erie, nine hundred miles; and from Charleston, six hundred miles. The valley, in which Cincinnati, Newport and Covington are built, is about twelve miles in circumference. The Ohio river enters this valley on the east, and passes out on the west side. The southern half of it is bisected by Licking river, which disembogues itself into the Ohio opposite Cincinnati, separating the towns of Newport and Covington. The upper plane on which Cincinnati is built is five hundred and forty feet above tide water at Albany, and twenty-five feet below the level of Lake Erie. Low water mark in the Ohio, at this point, is four hundred and thirty-two feet above tide water at Albany, and one hundred and thirty-three feet below Lake Erie. The shores of the Ohio at this point afford good landing for boats at all seasons of the year.

"In 1826 the manufacturing industry of Cincinnati, alone, amounted, according to an accurate statistical examination, to $1,800,000, in a population of sixteen thousand two hundred and thirty persons. At that time there were not more than fifteen steam engines employed in manufactures in the city. There are now upwards of

fifty in successful operation, besides four or five in Newport and Covington. More than one hundred steam engines, about two hundred and forty cotton gins, upwards of twenty sugar mills, and twenty-two steamboats—many of them of the largest size—have been built or manufactured in Cincinnati, during the year 1835. If then, in the year 1826, with a population of but sixteen thousand two hundred and thirty, the manufacturing industry of Cincinnati was $1,800,000, it is perfectly safe, with the facts before us, to place the productive industry for the year 1835, of Cincinnati, Newport, and Covington, with their population of thirty-five thousand souls, at $5,000,000. The truth is that Cincinnati and her sister towns are mainly indebted to their manufactures for the steady and onward prosperity which marks their career. Fortunately they have but few, if any, overgrown manufacturing establishments, but a large number of small ones, confided to individual enterprise and personal superintendence. These are distributed among all classes of the population, and produce a great variety of articles which minister to the wants, the comforts and luxuries, of the people in almost every part of the Mississippi valley. In truth, with the exception of Pittsburgh, there is no city in the West or South that, in its manufactures and manufacturing capabilities, bears any approach to Cincinnati and her associate towns.

"The region inseparably connected with, and dependent upon, Cincinnati, Newport and Covington, as their great commercial and manufacturing mart, embraces the country bordering on the two Miami rivers, the eastern portion of Indiana, and the adjoining parts of Kentucky, including the valley of Licking river. It may be estimated to contain ten million acres of land, having within itself the

capabilities of sustaining four millions of inhabitants. This rich and salubrious region is traversed by the Ohio, Licking, and Great and Little Miami rivers, all of them navigable to some extent, and the two last eminently adapted to manufacturing purposes. It is a region which produces abundantly, wheat, corn, barley, hops, oats, hemp, tobacco, horses, mules, sheep, cattle and hogs, to say nothing of the various mineral products which lie beneath the soil, and the fine timber which rests upon it.

"The progressive increase of population in Cincinnati will appear from the following table. In 1810, there were two thousand three hundred and twenty inhabitants; in 1813, there were four thousand; in 1819, there were ten thousand; in 1824, there were twelve thousand and sixteen; in 1826, there were sixteen thousand two hundred and thirty; at the present time, it may be safely placed at thirty-one thousand. If to this be added the population of Newport and Covington, the aggregate population will equal thirty-five thousand.

"For the want of the proper commercial regulations, the exports and imports from this point, annually, cannot be given with entire accuracy. At the close of the year 1826, the writer of this article, by a laborious examination, ascertained that the exports of that year were about $1,000,000 in value. A similar inquiry induced him to place the exports of 1832 at $4,000,000. For the year 1835, he feels no hesitation in placing them at $6,000,000, or upwards. This estimate is based upon the following facts and considerations.

"The general growth and prosperity of the city and surrounding country for the last few years; the increasing amount of tolls on the Miami canal; the enlarged number and variety of manufacturing establishments in Cincinnati,

Newport and Covington, within the last four years; the arrival in Cincinnati, during the greater part of the year 1835, of fifty stages and sixty mails per week; the steamboat arrivals at our quay, for the last year, being two thousand two hundred and thirty-seven; the receipt during the same period in this city of ninety thousand barrels of flour, and fifty-five thousand barrels of whiskey; and finally from the fact that, in the winter of 1832–3, there were eighty-five thousand hogs slaughtered in Cincinnati —in 1833–4, something rising one hundred and twenty-three thousand—while in 1834–5, (the whole of which, with those brought to this place in wagons and by the canal, went into the exports of the past year,) the number was one hundred and sixty-two thousand. If from these we turn to the manufactures for the same period, embracing twenty-two steamboats, one hundred steam engines, twenty sugar mills, two hundred and forty cotton gins, besides the varied products of our countless factories, in iron, wood, cotton, leather, hemp, oil, lumber, furs, &c., &c., it is perfectly obvious that the exports from Cincinnati, Newport and Covington, for the year 1835, have been above, rather than below, $6,000,000.

"It is to be borne in mind, that Cincinnati, Newport and Covington have attained their present population, commerce and manufactures, without the aid of any work of internal improvement but that of the Miami canal, and two Macadam turnpikes, one running sixteen miles towards Columbus, and the other twelve miles towards Lebanon. Let us now see what improvements of this kind are projected or actually in progress, the completion of which will directly and powerfully aid in their growth. 1. The extension of the Miami canal from Dayton to the Maumee Bay, a part of which will be completed early in

the ensuing summer. 2. A Macadam turnpike from Chillicothe to Cincinnati, a part of which is under contract. 3. The continuation of the Cincinnati, Columbus and Wooster, and the Cincinnati, Lebanon and Springfield turnpikes, portions of which have already been constructed. 4. The Cincinnati and Harrison turnpike, leading to the boundary line between Ohio and Indiana, a distance of twenty miles, which will be completed early in the present year, and hereafter continued to Brookville, Indiana. 5. A Macadam turnpike from Covington to Georgetown and Lexington, which is now constructing. 6. A canal, the construction of which is already authorised, from the sources of White Water, to Lawrenceburg, crossing the line between Ohio and Indiana into the county of Hamilton, and thence branching to this city. 7. The railroad now making from Lawrenceburg, twenty miles west of Cincinnati, to Indianapolis, and the railroad already authorised, to connect Lawrenceburg with this city. 8. The extension of the Cumberland road through Ohio and Indiana, crossing the Miami canal, and the routes of several of the turnpikes already enumerated, as they diverge to the north, from this city. 6. The railroad running from this place up the valley of the Little Miami, and branching at Todd's fork, one track passing on to Xenia, and connecting with the Mad-river and Sandusky rail-road, (now constructing) at Springfield, and the other stretching north-eastwardly to Columbus, and thence to Lake Erie, at Cleveland. And finally, the great railroad between this city and Charleston, the most magnificent and important public work that has yet been projected in our country. This road, stretching through the states of Kentucky, Tennessee, and South Carolina, with branches passing off into Georgia and North Carolina in the south, and in the north

sending a branch to Louisville, and another to Maysville, with the main track connecting at this point with the railroads running from Cincinnati to Indianapolis, and from Cincinnati to Sandusky and Cleveland on the lake, and also with the Miami canal, must of itself exert a degree of influence upon the future destiny of Cincinnati, Newport and Covington, that it is difficult to appreciate.

"These are works of internal improvement that are already begun or projected. They are all practicable—they will all be executed in less than six years from this time. The most difficult, expensive, and at first view unlikely to be accomplished, is that from the valley of the Ohio to the southern seaboard, yet we find that in less than five months from the time when public attention was first called to it, in this city, the states of South and North Carolina, Georgia, Tennessee, Kentucky, and Ohio, are alive to its speedy execution. And who can doubt that the people of these powerful, enlightened and prosperous states, will accomplish within a few years a work, which will bestow upon them, in all coming time, so rich a harvest of social, political, and pecuniary blessings?

"Fully to comprehend the influence which these various works will exert upon Cincinnati, Newport, and Covington, it should be borne in mind that these places are near the centre of the largest and most fertile grain growing region in the world; that these works of internal improvement will traverse this district in a manner calculated to concentrate at this point an immense amount of business; that in connection with this grain-growing region are exhaustless beds of iron, salt, coal, and other valuable minerals; that the climate is salubrious, and the temperament of the people active, ingenious and enterprising. The careful examination of these things cannot fail to convince

the most skeptical that Cincinnati, Newport, and Covington, will enjoy continued and rapid advancement in wealth and population.

"Thus far the physical causes that are supposed to be operative in building up this city, have been principally considered. There are others that should not be overlooked. By recurring to the habits, taste, and moral and intellectual culture of the population of Cincinnati—the number of their literary, scientific, and benevolent institutions—their industry and enterprise—their quiet and orderly observance of the laws and municipal regulations, it will be found that these important elements in the progress and permanent prosperity of a city are strong, varied, and in active operation.

"We cannot close this article without commending the taste and architectural skill that have been put in requisition, in the construction of both our public and private buildings, within the last few years. Among the one hundred and fifty houses erected in Cincinnati, during the year 1835, there are many which would, in these particulars, do credit to any city in the Union. This is more particularly true of a number of warehouses — of St. Paul's church—of the two banking houses on Third street—and the ten or twelve edifices for the use of common schools, all of which are large, commodious and elegant, and contribute in a high degree to the adornment of our beautiful city.

"Finally, it may be said, that Cincinnati yields to no city in the Union in the inducements which she presents to a residence within the noble amphitheatre of hills that surround her. This is true in regard to the intelligence, and refinement of society, the necessaries, comforts, and luxuries of life; the moral and religious character of her

population: it is true in regard to the field which she presents for industry and enterprise in commerce and manufactures; it is true in regard to the opportunities she presents to the capitalist, for safe and profitable investments in *real estate.* On these points investigation is challenged, especially the latter; for it is confidently asserted that *real estate*, at the present time, is lower in value, in Cincinnati, Newport, and Covington, than any city of the Union, whose population, business, and permanent local advantages, are of corresponding magnitude. This single fact proves, incontestibly, that in the present prosperity of these places, there is nothing factitious, but that it is the natural result of those numerous indestructible moral and physical causes which, before the year 1850, will give to Cincinnati and her associate towns, one hundred thousand active, educated and enterprising citizens."

CHAPTER XIV.

Cincinnati—its advantages for manufacturing.

On the 30th of September, 1841, at a meeting of the citizens of Cincinnati, a committee of thirteen persons was appointed "to collect information in regard to the eligibility of this city and its neighborhood, as a site for a national armory, and to report the same, arranged and embodied with such arguments as they might deem proper," &c. The writer of this work, as chairman of that committee, prepared a report, in conformity with the resolution, which was adopted, printed, and forwarded to the members of Congress. As the facts and arguments presented on that occasion, for the purpose of demonstrating the advantages of Cincinnati as a location for the manufacture of arms and military munitions, are equally applicable in reference to other manufactures, and especially to all fabrics of iron, we shall insert the report entire, with the exception of some slight changes of phraseology. The reader will bear in mind that when this article was written, in 1841, Cincinnati contained less than sixty thousand souls, and that our population now, in 1848, is one hundred thousand, and that a proportionate addition should be made to our figures and estimates.

In selecting a site for a national armory, there are two chief objects to be kept in view:

1. The comparative facilities for the manufacture of arms, afforded by the several places proposed, and

2. Their geographical positions in reference to the points to which arms are to be distributed.

Both these propositions involve considerations of great importance, because it would be in vain to select a site at which arms could be manufactured more cheaply than at other points, if that advantage should be overbalanced by the superior expense of transporting them to the places at which they are to be used; or if delays of more or less frequency and duration would probably result from the position of the site, in relation to the great natural and artificial highways which connect the extremes of our country.

We have therefore taken both the above branches of the inquiry into careful consideration, and as the result, respectfully present the following facts and arguments.

The armory is to be upon *the Western waters.* We assume that water is to be used as a motive power, and for transportation; and that in adopting the phrase *Western waters*, particular reference was had to the Ohio and Mississippi, and their navigable tributaries, on account, not only of the water power, but also of the immense and unrivaled advantages they afford for transportation, for commerce, and for the various transactions of business which are inseparably connected with manufacturing operations. We assume, further, that to secure the full benefit of these advantages, the spot to be selected should be upon one of the larger rivers, affording navigation during the greater part of the year, for heavy steamboats, and easily accessible at all times by land or water; and which has already secured to itself the facilities of trade and manufacturing. An armory would not, of itself,

afford sufficient inducements to individual enterprise in its vicinity, to become the nucleus of a future town, nor would it draw to itself, as a centre, any system of communications by road and canal; and if the government acts upon the principle which would direct a judicious individual, it will seek the spot at which these advantages have been ascertained and established.

We believe that Cincinnati possesses a greater amount, and a superior combination, of these requisites, than can be shown at any other point. Any place higher up upon the Ohio will be less eligible as to navigation, and the farther we ascend this river, the more formidable will be this objection, until we reach Pittsburgh, where it becomes, as we apprehend, insurmountable. The argument of centrality entirely ceases when we reach that point, which is on the extreme verge of the great Western valley, and at the greatest possible distance from important portions of the frontier. The obstruction of the navigation by ice continues longer, by at least two months in the year, than in the downward navigation from Cincinnati, and the interruption by low water in the summer is even greater, in the comparison between the two places. The same comparison holds good in regard to all canals, and other communication by water, with these places. The difference of the direct distance to Lake Erie is but small; and the actual distance to be traveled, by any communication now existing or in contemplation, is about the same; leaving them no advantages for transportation to the northern frontier to counterbalance the serious objections to their position in relation to the south and west.

The objection of remoteness from navigation and business applies equally to all places which are *interior* as

respects the Ohio and Mississippi, or which are situated high up the tributaries of those rivers. As we recede from the great arteries of commerce, we find the distance and difficulties of transportation increased, the supply of workmen and materials more precarious, and the facilities for the transaction of business greatly reduced.

We suppose, also, that the government, in proposing the establishment of a western armory, is actuated by a double motive. 1st, By the obvious propriety, as a matter of economy and convenience, of manufacturing arms within the district of country in which they are to be used, so as to avoid the expense and delay of distant transportation; and 2d, By a disposition to distribute impartially the national expenditures, which have heretofore been made chiefly in the Atlantic states. These being the presumed objects to be kept in view, we suppose that the location will be made *within one of the Western states*, and that all other places, however well situated, will be thrown out of competition. But we shall, with confidence, feel at liberty to claim the advantage of this argument, in urging for Cincinnati a preference over any other place not possessing superior advantages for manufacturing and distribution, nor being within one of the western states. Such is the case in regard to Pittsburgh, which, lying within the state of Pennsylvania, has no fair claim to a disbursement of the public money intended for the benefit of the Western states, and which, we shall also show, is less favorably situated for an armory than Cincinnati.

It is also worthy of remark that, so far as the government may be actuated by the beneficent policy of making this disbursement for the benefit of the Western people, Cincinnati affords peculiar advantages for carrying out

these views. Situated in a corner of Ohio, having Kentucky within sight, and Indiana within a few miles distance, and trading almost equally with these three states, they would each derive benefit from having the disbursement made at this point. The provisions consumed would be furnished from all the three states, and the important item of iron would be supplied, in nearly equal proportions, from Kentucky and Ohio.

We proceed now to enumerate some of the advantages of Cincinnati and its vicinity.

First. As to the facilities of this place for the manufacture of arms.:—

It might perhaps be sufficient, under this head, to rely upon the general proposition, that Cincinnati is now the greatest manufacturing place in the Western country; it is not only first in the amount of capital, the number of persons employed, and the variety of its mechanical products, but it is unsurpassed in the excellence of its fabrics and in the skill and ingenuity of its workmen. By means chiefly of this manufacturing population, and of the unrivaled productiveness of the surrounding country, a city has grown up here within the memory of some of its living inhabitants, which now contains nearly sixty thousand souls, and whose wealth, great in proportion to its numbers, is exhibited in its vast business operations, its elegant and commodious private dwellings, its fine public edifices, its numerous and expensive improvements of every description. The millions of property existing here, at a spot which was a wilderness but half a century ago, have been created by the labor, ingenuity, and enterprise of the people; no part of it has grown up under government patronage, and but little has been brought here by emigrants. All has been the result of labor judiciously

applied, by a population originally poor, at a spot combining an unusual coincidence of natural advantages; and the object of this brief statement is, not to boast of those advantages, but to present the fair inference, that the same natural facilities for manufacturing purposes which have so rapidly promoted individual success, *afford the best evidence of the suitability of the spot for similar operations on the part of the government.* No argument *a priori* can be half so satisfactory as the results of actual experiment; nor can the government derive from any investigation, however able, information so conclusive, as the great volume of facts which so prominently attest our prosperity, and so plainly indicate its causes.

We proceed now to inquire into the several points, which are considered of primary importance in the selection of a site for an armory.

1.—*As to the water power.* Some misapprehension seems to have prevailed, in regard to the amount of power required for an armory; and claims have been set up for places not otherwise conspicuous in consequence of their possessing this requisite to an extent greater than is necessary. We have had access to the best information on this subject, as our city contains many large founderies, and establishments for constructing engines and machinery of every description, some of which employ from one to two hundred hands each. Their work is similar in kind to that done at an armory, and a portion of it, such for instance as the boring of large cylinders for steam engines, requires as great power as ever would be used at an armory. Yet the motive power requisite for such work is small, and forms an inconsiderable item in the expenses. We have also examined a valuable report, made in January 1825, by Col. McRee, and Lieut. Col. Lee, and Capt.

Talcott, commissioners appointed by the government, to examine sites for a Western armory. Assuming the armory at Springfield, Massachusetts, which then worked two hundred and fifty hands, as the model, they estimate the desired water power as equal to that which would propel twelve pair of mill-stones of five feet diameter, but intimate an opinion that this would be a liberal allowance. Some of our most experienced mechanists here suppose that half that power would be abundant, judging from what they actually use in similar work. Perhaps the improvements in machinery in the last seventeen years may account for this discrepancy. But taking the higher estimate, that of the commissioners, we can furnish from the Whitewater canal, which will be completed within the present year, all the power that would be required. This canal extends from Cambridge city, on the National road, in Wayne county, Indiana, to Lawrenceburg, on the Ohio, in the same state. Under a charter from Ohio, a canal, uniting with that of Indiana, has been cut from Whitewater to Cincinnati, a distance of twenty-five miles, which passes North Bend, one of the points examined by the commissioners above mentioned. In their report, North Bend is favorably mentioned, in comparision with the same places which are now prominently presented in competition for the armory, although among the estimated expense of the erection, was included that of bringing the water to North Bend, from a distance necessary to give the required head, which would have been about $250,000, but which has now been done by the construction of the Whitewater canal. This power, which is as yet wholly unappropriated, is sufficient to run ninety pair of millstones of four and a half feet diameter, or double that

number, should an increase be needed, by an additional expenditure of about $60,000.

The surface of the water in the Whitewater canal will be fifty-four feet above the low water of the Ohio. The annual rises of the Ohio at this point are estimated at from thirty-five to forty-five feet, and the continuance of the water at the highest point is very brief—usually but three or four days. The interruption from the ordinary freshets occurs so seldom, and is of so short duration, as to be considered of no importance. The great rise of 1832 attained the height of sixty feet, but no similar rise had occured before that time since the year 1795, when the high water attained an elevation of about fifty-four feet; and the Indians spoke of an extraordinary rise at an anterior, but distant date. These remarkable freshets, caused by very rare combinations of atmospherical phenomena, appear to occur at intervals of from forty to forty-five years. Their effects are by no means destructive to permanent buildings, as the velocity of the stream is confined to the natural channel, and the portions of water which overflow the land have little or no perceptible current. We mention this as the only inconvenience attending the location on this canal; but it will be found to exist at every other site having similar advantages for navigation, and we consider it but slight in itself, and greatly overbalanced by the superior advantages of Cincinnati in other respects.

A gentleman* of great scientific attainments and accuracy of research, who investigated this subject carefully in 1832, in reference to the great rise of that year, supposes that these extraordinary freshets do not occur more

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*Dr. Locke.

frequently than once in fifty years. It is worthy of consideration, whether the annual floods of the Ohio will not probably be gradually decreased by the removal of obstructions from its channel, and also by the clearing of the country, and the consequent increase of evaporation.

It is to be remarked, that the above estimates apply to a location on the Whitewater canal at Cincinnati, and that the danger of interruption from high water would become less, as we recede from the city towards North Bend. The canal having a descent of one inch per mile, there would be fifteen inches of elevation gained by placing the armory at the latter place, and the river having a descent of from three to four feet between the same points, the whole gain, as between the surface of the canal, and the low water mark of the river, would be about five feet. The elevation of the canal there would be fifty-nine feet, and the highest ordinary rises being forty-five feet, there would be fourteen feet of water power left above such rises. The result is, that at Cincinnati a wheel of nine feet diameter, which we suppose would be sufficient, or at North Bend, a wheel of fourteen feet, would never be interrupted, except by the extraordinary freshets; at North Bend the buildings placed on the ground would be never incommoded by high water, and at Cincinnati they could be protected from that inconvenience by a basement of three or four feet.

An important recommendation of the Whitewater canal is found in the fact, that the water power is distributed along the last level of the canal which reaches from North Bend to Cincinnati, a distance of fifteen miles, so that a location may be chosen for these works, either in the city, or at North Bend, or at any intervening point, which may be considered preferable. This option of a city, or country

location, or of a spot combining the advantages of both, is considered as deserving the special attention of the government.

If, however, a site within the city be considered desirable, it can be procured, entirely above the highest rise of water, in an eligible situation, with a power from the Miami canal sufficient to run six pair of five feet millstones.

2. *As to the resources of this place, in iron, coal, and other materials.*

The iron of the region embracing the mouth of the Scioto, and extending on both sides of the Ohio, for fifty miles, is superior in quality, for making the finer description of castings, to any in the United States. It is unsurpassed by any metal, known to the most experienced manufacturers who have used it, and we risk little in asserting that it must be used at the national armory, wherever it may be established. It is now carried to Pittsburgh in large quantities, and has been substituted for the iron of that region, in all work that requires the best quality of metal. Whether the contemplated armory be established at Pittsburgh or at Cincinnati, it would necessarily be resorted to, as the best, and indeed, the only suitable metal to be had at either place; and the difference between the two places would be, that to the former place it would be carried against the current of the Ohio, five hundred miles, while to the latter it would be floated with the current one hundred and twenty to one hundred and fifty miles. The actual difference in the price of this article is usually about $4 in favor of Cincinnati; when the navigation is interrupted by low water or ice, it is greater; and at the date of this report this description of pig metal is selling here at $25 per ton, when it is quoted at Pitts-

burgh at $31 to $33. Placing the difference at $4 per ton, which is the lowest estimate, there is an advantage of nearly one-sixth, as between Cincinnati and Pittsburgh, in favor of the former, in the price of the most expensive article used in the manufacture of arms.

In the article of malleable bar iron, Pittsburgh has heretofore stood unrivaled, the Juniata iron having been decidedly preferable to any other; but the bar iron now manufactured from the Scioto or French Grant metal, is in all respects fully equal to that made from the Juniata ore, and can be supplied here in any desired quantity, at the same price at which the Juniata iron can be afforded at Pittsburgh.

With regard to both pig and bar iron, the supply at this point is abundant and exhaustible. There are now, in the French Grant and the adjacent region in Kentucky, twenty-seven furnaces, furnishing one hundred tons of metal per day, and any possible increase of demand will no doubt be met by a corresponding addition to the means of bringing the ore into marketable form.

The next important article is coal. The kind which is used for working iron, both here and at Pittsburgh, is the coal of the Monongahela; no other coal is so suitable for such work. It is supplied to the manufactories here at an average of nine cents per bushel, and to those of Pittsburgh at four and a half cents, and as this article has been supposed to be of primary importance, a preference has been claimed for Pittsburgh, on account of its greater cheapness at that place. But this view is founded in error. One ton of coal is required to work one ton of iron. A bushel of coal weighs seventy-eight lbs.: a ton of coal therefore is twenty-five and two-thirds bushels, which at

nine cents per bushel would be $2 31, and at four and a half cents would be $1 15½.

The question then, as between those places, would stand thus:

At Cincinnati there would be a saving in the cost of the pig metal of - - - -	$4 00 per ton.
At Pittsburgh there would be saved on coal -	1 15½
Making a difference in favor of Cincinnati, on each ton of iron used, of - - -	$2 84½

We have also other sources for the supply of these essential articles. The state of Kentucky is now carrying on an improvement of the navigation of Licking river, which empties into the Ohio, opposite this city, by means of which that stream will be made navigable by dams and locks, for two hundred and thirty-one miles from its mouth. The completion of this work may be speedily looked for; five locks are under contract, and nearly completed, which will carry the navigation fifty-one miles into Kentucky; and the remainder of the work will probably be pushed forward to an early termination. The region penetrated by this work is rich in iron and coal. Iron is found in large quantities on the banks of this stream one hundred and forty miles from its mouth; and inexhaustible beds lie higher up. Furnaces and forges have been at work for a number of years; some of the iron, which has been brought to this city, has been found to be of excellent quality; of this there are two kinds, one of which is a very superior article, similar in kind to the French Grant iron, and fully equal to it. The coal is also abundant and of good quality.

Of the various other articles used at an armory, such as black walnut wood for gun stocks, charcoal, linseed oil, paper, &c., it will be seen that all these are among

the staple products of our soil or manufactures; and the inference is fair that a regular supply, at moderate prices, may be depended upon.

3. *Of the facilities which may be afforded by Cincinnati as a large manufacturing city.*

We have already stated the fact, that this is a large manufacturing city, having now in successful operation, a great number and variety of manufactories, employing a numerous body of well trained, skilful, and ingenious workmen. This advantage is so obvious, that it need hardly be urged, farther than to establish the facts upon which it is asserted.

By the census of 1840, it appears that the manufactures of Cincinnati amount to the annual value of $14,541,842; but by a more detailed statement made since by Mr. Charles Cist, in a work entitled "Cincinnati in 1841," those manufactures, and the number of citizens employed in them, are specified, with as much accuracy as is probably attainable, as follows:—

Manufactures.	*No. of workmen.*	*Annual value.*
Wood principally or wholly,	1,557	$2,222,857
Iron,	1,250	1,728,549
Other metals,	461	658,040
Leather, entirely or principally	888	1,068,700
Hair, bristles, &c.,	198	366,400
Cotton, wool, linen and hemp,	359	411,190
Drugs, paints, chemicals, &c.,	114	458,250
Brick, earthen ware, stone, &c.,	301	238,300
Paper,	512	669,600
Provisions,	1,567	5,269,627
Science and the fine arts,	139	179,100
Buildings,	1,568	953,267
Miscellaneous,	1,733	3,208,790
Total,	10,647	$17,432,670

The foregoing is the general aggregate, showing the number of persons now employed in our manufactories and mechanical business and arts, to be ten thousand six hundred and forty-seven, and the annual value of our products to be $17,432,670.

It will also be seen, that these products embrace almost every variety of mechanical labor and ingenuity known to our country; and when it is considered how much every division of mechanical industry is dependent on kindred branches, it will be seen that this is no unimportant recommendation. However complete a government armory may be, and however numerous the branches of art it may embrace, it will not always be prepared for the construction of every article that may be needed, and resort must sometimes be had to private establishments. At Cincinnati, this kind of assistance can be well supplied, as there is no art or branch of art, which may be required in the public work, that is not prosecuted here.

On the great principle of division labor, so successfully practised in England, another important suggestion presents itself, namely, the economy and the perfection of workmanship which would be attained, by procuring, by contract from individuals and private establishments, the separate parts of many of the articles fabricated at an armory, and putting them together at the public workshop. The variety of branches of art carried on here, the perfection they have attained, and the great number workmen engaged in them, would yield facilities for the minutest subdivision of labor that might be desirable, and for a competition that would bring the labor to its minimum price; while the patronage, thus extended by the government to private enterprise, would stimulate its energies,

and greatly tend to enlist the favor of the public towards the operations of the government.

It is also a fact, that our manufactured articles are of superior quality. It was long since discovered, that if the products of our workshops were only equal in workmanship to those of the Atlantic states, from which all our supplies had been drawn, we could not compete with them successfully, as they had the advantage of an established reputation, and consequently of a settled public opinion in their favor. It became necessary to excel them; and to this end the energies of our mechanics and manufacturers were judiciously exerted. The best materials were brought into use, the most approved inventions, and the most skilful workmen, were imported from the eastern factories, and a systematic effort was employed to produce the finest specimens of art. So successful have been these endeavors, that many branches of art have been brought to the highest degree of perfection, and the eastern articles which had competed with ours have been driven from the market. The ambition to excel, and the conviction that by excelling only we could establish and sustain a high character as a manufacturing place, have pervaded all our workshops, and have raised up that efficient body of intelligent and well trained mechanics, of which we are justly proud.

In placing their armory here, the government would secure the benefit of all the skill and experience which have been collected by private enterprise; and they would be certain in any emergency, occasioned by the loss of workmen, or by the necessity of increasing their working force, of being able to procure the best artizans for any branch of work. And it is also worthy of consideration, that the sciences, as connected with the useful arts, have

been extensively cultivated here; and that in addition to an admirable system of public schools, there are institutions fostered here for the special instruction of young mechanics.

The completeness of the machinery in many of our workshops is but imperfectly known, even among ourselves; but the subject is one which, to do it justice, requires greater minuteness of description than is attainable in a brief report. There are branches of arts which can only be carried on successfully by the aid of complicated machinery of great power and accuracy. Such machinery is seldom the result of a first attempt, because much of its success depends upon the climate, the quality of the material composing it, and other circumstances which vary in different places. Its perfection here has been attained by repeated and persevering experiment, and there is now scarcely any mechanical process, however difficult, which cannot be effected by our excellent and powerful engines.

All these considerations give to Cincinnati very decided advantages for manufacturing over any place at which the mechanic arts are not in operation, or where they are pursued upon a narrower scale.

4. *The advantages of Cincinnati on account of the facilities of access by land and water; its salubrity at all seasons; the cheapness and abundance of all the necessaries of life; and its numerous facilities for the transaction of business.*

As the first of these points will be included under our observations in regard to the transportation of materials and arms, we shall touch it here but briefly. It is obviously desirable that the armory should be at a point central and easily accessible from various directions, and possessing facilities for the conveyance of mails and passengers. These conveniences would greatly expedite the transaction

of business at all times, but during the existence of a war they would be indispensable. The success of an important military movement, or even of a campaign, might depend on the rapid conveyance of intelligence between the depots of arms and the army to be supplied.

In this particular Cinninnati presents unrivaled advantages. Our mails are now carried to Baltimore and other eastern cities by a connected chain of railroads and macadamised turnpikes, so that the mail from Baltimore reaches us in three and a half days, and the improvememts in progress, by increasing the proportion of railroad conveyance, will in a few years greatly shorten even this rapid transit of intelligence. The completion of the Little Miami railroad, from Cincinnati to the intersection of the Cumberland road at Springfield, has shortened the time by several hours. The same road will be completed to Sandusky this summer, and will thus open a rapid communication with the northern frontier. A fine turnpike, in a state of rapid progress between this place and Lexington, Kentucky, and more than two-thirds of which is done, will unite there with the great road from Maysville to Nashville, and there are in all one thousand one hundred and twenty-five miles of canals, railroads and turnpikes, branching off from Cincinnati in every direction; besides which the Ohio and and Mississippi, with their tributaries, furnish highways which extend throughout the west and south, and the active enterprise of our citizens, keeping pace with the latest improvements in machinery and ship building, has improved these facilities by the construction of fast steamboats, and particularly of a small class of boats, which pursue the downward navigation throughout the whole of the low water of ordinary years.

The healthiness of Cincinnati and its vicinity, at all

seasons, is unsurpassed; in the summer and fall we are entirely exempt from the epidemics which prevail at more southern locations.

In selecting the locality for an establishment at which a considerable number of workmen, with their families, will be collected, the facilities for procuring the various articles of food form an important consideration. In this respect Cincinnati stands unrivaled; it is the largest provision market in the United States. It will be seen, from the subjoined tables, referred to above, that the various articles of food manufactured and prepared for market at this place amount, annually, to $5,269,626.

From data, procured at the collector's office of the Miami canal, we have ascertained the quantity of a few of the principal articles of produce brought to Cincinnati in the year 1840; and from dealers in those articles an estimate of the quantity arrived by wagons, chiefly from the same valley, which are as follow:

Flour by canal, 165,762 bbls.,	
" " wagons, 40,000—205,762 at $3 50 -	720,167
Whisky by canal, 74,026 bbls.,	
" " wagons, 7,400—81,426 at $7 per bbl., -	569,982
Pork by canal, 17,687 bbls. at $12 per bbl., -	212,224
" " 787 hhds. at $40 per hhd. -	31,480
" " 2,192,160 lbs. in bulk, at 5 cents, -	109,608
Beef, by canal, 865 bbls. at $10 per lb., - -	8,650
" " 12,138 lbs. at 5 cents per lb., -	606
Lard, by canal, 20,638 kegs at $3 per keg, -	61,914
Pork, lard and beef, by wagons, - - -	1,000,000
Corn and oats, by canal and wagons, - -	300,000
The receipts of the same articles through the Portsmouth canal, from the 1st December, 1840, to the 1st October, 1841, as ascertained from the collector's office, amount in value, at the above prices, to -	734,890

Add 1-6th for the unexpired 2 months of the year, -	122,481
Add articles of food, as above, - - -	5,269,626
Total, - - -	$9,141,629

The completion of the Whitewater canal, within this year, will bring to this market the produce of four hundred square miles of the most productive counties of Indiana, which, compared with the territory drained by the Miami canal, is as twenty-five to eighteen in favor of the Whitewater canal. The Miami valley is the oldest and best settled, but the difference in this respect is daily decreasing; and as the provisions received by the Miami canal greatly exceed $1,000,000, it will be a moderate estimate to set down those which will be received by the Whitewater canal at the annual value of $1,000,000.

And if to this be added a variety of small articles, which are known to form an immense aggregate, but of which the particulars cannot be obtained, such as potatoes, and other vegetables, poultry, butter, eggs, cheese, apples and dried fruit; and also the further increase by the Lexington turnpike and Licking river improvement when completed, another $1,000,000 may be safely computed; and the whole amount of provisions, brought here for sale or shipment, will be found to be at least $11,000,000 annually, which at the present value of the army ration would provision an army of more than one hundred and fifty thousand men throughout the year. So that this city alone can furnish the provisions for any number of troops which this government will ever be obliged to maintain in a war with the greatest power of Europe.

The various facilities for business at this point may be inferred from the activity and magnitude of its operations. An economical government, desiring to attain its ends by the cheapest means which are consistent with their most

perfect accomplishment, should avail itself of all the facilities which nature aided by private enterprise has accumulated, at a spot happily situated for the purposes in view, and thus avoid unnecessary expenditures for overcoming natural obstacles, and creating the artificial advantages which attend the established relations of business. Business cannot be forced easily out of its regular channels, and in making the attempt, the government would pay an extravagant premium for a purpose not desirable in itself. They will find here, in complete operation, all the institutions of social order, and all the ramifications of well organised business, of some of which they would at other places be and remain destitute, while others they would be compelled to create, perhaps imperfectly, at an inordinate expense.

A republican government, looking to the good of all its citizens, however humble, should have a care for the comfort, the prosperity, and the morals, of those who are in its employ. Of the two hundred and fifty workmen collected at this armory, many will have families, making an aggregate of not less probably than one thousand souls, whose social condition will be seriously affected by the choice of the location. It would be a pernicious and anti-republican policy, which, to benefit a favored section of country, or to secure a non-essential advantage to the government, should place all these individuals at a spot where they would be deprived of health, of a cheap and comfortable subsistence, of the advantages of society, or of the means of education and religious instruction. We offer them all these; for it is to the existence of all these, that we owe the continual influx of a valuable population of the working class. They will find a community of mechanics, and a system of institutions built up by the labors

of this class of citizens, and adapted especially for their benefit. At most of the places spoken of, south of this location, the mechanic arts have been but little encouraged, labor is not respected, and the condition of the working man is not so comfortable as it is with us. Our temperate latitude ensures a favorable medium of temperature for labor, and for health. Our abundant markets, and numerous workshops, supply food, clothing, furniture—all the necessaries and many of the luxuries of life, at a cost within the reach of the mechanic. The many useful and liberal institutions established here, in which mechanics bear a part, give employment to their leisure hours, and elevate them to their proper standing in society.

Another important advantage to the mechanic here, consists in the variety of arts and professions carried on at this point, which affords to a family of several individuals, following different branches of business, the opportunity of finding employment, at the same place. The father of a numerous family may consult the disposition and capacity of each, and train them all up to different callings, without being forced into the painful and demoralizing necessity of breaking up the family circle.

Our city offers a further inducement, which, other things being equal, should give it a decided preference over other places not possessing the same important institution. We have a system of common schools, sustained by taxation, at an annual expense of $25,000, employing sixty-nine* teachers, and offering gratuitous instruction to all the children between the ages of six and sixteen years, residing within the school districts. Nine

*The official report for June, 1847, shows that the number of teachers has been increased, since the above was written, to ninety-

spacious and well constructed brick edifices, built for the purpose, in different parts of the city, accommodate these schools, in which solid instruction is given in all the branches of an ordinary English education, by faithful teachers, under the supervision of efficient boards of examination and inspection. The means of instruction are not only ample, but well administered, the schools are fully equal to the best private schools of the same grade, and furnish all the education that is desirable, and in most cases attainable, for the common purposes of life. They have to a great extent superseded the private schools; there are however a number of the latter, much improved by the competition of the public schools, and which, with two excellent colleges, complete our admirable facilities for education.

Second. The next general subject to which the attention of the committee has been directed, has reference to the geographical position of Cincinnati, and the facilities which it affords for the distribution of arms.

In the report of Col. McRee and others, already referred to, we find that the advantages for distributing arms are considered as of minor importance. The commissioners say:—

"We do not perceive any reasons, of a military nature, that can materially affect the relative value of different sites, in consequence of their respective distances from the points at which the consumption of arms would probably occur in time of war.

"To consider the relations of an armory in the same

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seven, and the number of public school houses to twelve, while the aggregate salary of the teachers is $26,517 50. The number of pupils enrolled in that year were ten thousand one hundred and twenty.

light with those of a magazine or arsenal, would be an error; the means of production being the principal requisite for the one, and those of conveyance for the other."

This opinion is certainly entitled to great respect; and we should not object to its adoption in its fullest extent, for if the means of production be considered as alone important, Cincinnati would stand without a rival, as we have here the facilities for mechanical production, both natural and artificial, ascertained and developed to the utmost extent. But if it be meant that the facilities for distribution are of secondary importance, when compared for those of manufacturing, we shall not dissent from the proposition, but shall proceed to vindicate the superiority of our position in this respect also.

The primary purpose of an armory is to manufacture arms; but the transportation of them to the points at which they would probably be required is also important; and when these advantages can be combined, we conceive that neither of them should be overlooked.

The superior facilities of Cincinnati, for forwarding arms in opposite directions, would be important in obviating, to some extent, the necessity of having depots at points nearer to the seat of war, and more exposed to danger. If the transportation to the lake shore can be effected in twenty-four hours, a depot nearer to that frontier would hardly be considered necessary; the supplies could be renewed from time to time whenever required; and damaged arms could be returned for repair; while if a longer time was to be consumed in reaching the seat of war, there would be a greater expenditure of time and money; the supply would be slower and less certain, and the danger of failure in a critical emergency would be increased.

A glance at the map will show the central position of this city, in regard to the frontiers which must be supplied from a western armory. The most important of these is the frontier dividing this country from the possessions of Great Britain. Of the great lakes which separate Upper Canada from the Western states and territories, Lake Erie is the most southern, bounding a portion of Ohio, and approaching to within two hundred miles of Cincinnati on a direct line; while beyond this state, to the east or west, the boundary recedes to the north. On the other hand, the Ohio river, after running south west for about two-thirds the distance between its head and Cincinnati, suddenly changes its course to the north west, and continues that direction until it passes North Bend, when it again turns to the south. Thus, after descending the Ohio six hundred miles, and passing its shoalest water, we are, here, in consequence of the southward curve of the frontier line, and the northward bend of the river, brought to within two hundred miles of the frontier, while there is no eligible point for an armory on the same river further up, which lies nearer to that line; nor is there any point, above or below, by which it can be so easily reached.

As we recede south or west from Cincinnati, the access to the northern line is rendered more difficult, and the disadvantages of an ascending navigation and of transshipment incurred; and there is no point north of this place affording equal facilities for navigation to the south and west. From Pittsburgh, or any place in that region, the navigation of the Ohio is suspended by low water, during the summer and part of the autumn of every year, while from Cincinnati, the interruption from this cause is only occasional, and then for short periods. Having reached Cincinnati, no advantage would be gained for

downward navigation, by selecting a site lower down, because, when boats can get out of the Ohio from any place above the mouth of Cumberland, they can also get out from Cincinnati. During the present season, for instance, when the river has been as low as usual, and within four inches of the lowest state known in the most unfavorable season, the smaller class of steamboats have continued to run downwards without cessation, while the communication with Pittsburgh has been entirely cut off.

The obstruction of the navigation by ice commences earlier, continues later, and occurs more frequently, at Pittsburgh than at Cincinnati; giving to us an advantage of six to eight weeks more of navigation in the course of each winter. This objection applies to all the canals and other communications by water, and also to the use of water for power, and affords an insuperable reason against the selection of a place in that latitude. The difference of one and a half degrees of latitude, and of an elevation equal to at least one degree of latitude, together with the vicinity of the head waters of the Ohio to the cold region of the mountains, sufficiently indicate the causes why the temperature must be so much lower than ours, as to produce the effects we have stated; and the fact, that the largest portion of the tributary streams of the Ohio enter it from the south, affords reason for presuming a still greater difference in the temperature of the water and the formation of ice.

It is one of the peculiar recommendations of this spot, that while we are far enough from the frontier to be entirely secure from the possibility of danger from the enemy, we are near enough for the purpose of affording supplies; and that while protected by distance and by a large interposing population, the great resources of Ohio and

the energy of its people are daily adding to its facilities for intercommunication. The channels which commerce is continually opening and improving, for the transportation of the immense products of our soil and industry, will always be amply sufficient for the government, in peace or war.

The communication between this place and Lake Erie is now open, by means of the Ohio river, and the canal from Portsmouth to Cleveland; the distance by this route is four hundred and twenty miles.

The Miami canal is completed to the junction of the Maumee and Auglaise, where it intersects the Lake Erie and Wabash canal,—connecting thence by the Maumee river with Lake Erie, by a route of two hundred and fifty miles, and connecting with the Wabash by canal.

Besides affording a direct and cheap conveyance for heavy freight to the lake; this canal has become a very important thoroughfare for the interchange of commodities with the valley of the Wabash.

The Little Miami railroad is completed to Springfield, eighty-four miles from Cincinnati, fourteen miles only remain to be made of the Mad river railroad to Urbana, from which place the road is complete to Sandusky. The completion of this work will afford the means of transporting arms from this place to the lake in twenty-four hours. We come then to the conclusion:

1. That in regard to the supply of metal and other materials, and of workmen—the facilities for manufacturing —the climate, health, subsistence, domestic comforts, and social advantages—Cincinnati presents a combination of favorable circumstances which places her far above competition. If some of these advantages exist elsewhere, there is no other place at which they are all united.

2. The water power is sufficient.

3. That for conveyance and distribution, the advantages of Cincinnati are equal to those of any other place, superior to those of most places.

If, to an establishment for the fabrication of small arms, it should be contemplated to add a foundry for cannon, all the above facts and arguments would apply more forcibly in our favor, as the quantity of iron required, and the weight of transportation, would be greatly increased; and our metal is peculiarly adapted for that purpose. The castings made from the French Grant iron have a superior lightness and tenacity, with a smoothness and polish which recommend it as an uncommonly excellent material for cannon.

In the report of Col. McRee and others, before referred to, we find our views fully corroborated. They say, speaking of North Bend:

"This site offers, in several respects, peculiar advantages. The extent and fertility of the adjacent country, and its proximity to Cincinnati will assure to it a plentiful supply of provisions, and the command of all necessary supplies of materials and labor.

"The navigation of the Ohio is free from many of the impediments which exist at higher points. The health of the place is comparatively good; and the volume of water afforded by the Miami, at its lowest stage, is abundant."

These remarks were made seventeen years ago, when the resources of this vicinity were but partially developed. The vast area of fertile country, of which it is the centre, its national facilities for trade and navigation, and its latent water power, were sufficiently obvious; but its extensive manufactories, its artificial communications with distant

points, and the water power of the canals, have since been added. Since then the population of Cincinnati has been quadrupled, and the increase of its wealth, mechanical energies, and commerce, has been still greater.

In another respect, the change produced by a few years is remarkable. The commissioners assume that the Juniata iron and the coal of Pittsburgh, must be used at the armory, wherever situated; and in all their estimates, they give to Pittsburgh the important advantage of furnishing these articles, while to all other places the cost of the freight of these articles is added. However true this was in 1824, it is so no longer. Pittsburgh has ceased to be the great emporium of iron. A richer metal has been found in our vicinity, in beds of inexhaustible magnitude, and we now supply to Pittsburgh not only that material, but a large portion of the provisions which feed her laborers.

We close with the remark that, in case of a war with Great Britain, Ohio will form an important member of the United States. Her frontier will be exposed; her population of one million and a half will stand in the front rank of danger. Self defence will oblige her citizens to stand forth in protection of the national liberty and honor. The government must look to us for men and provisions. Our firesides, our soil, and our workshops, must furnish the sinews of war. Those rich resources and great energies, which have fed the streams of our commerce and manufactures, will furnish abundant stores for the sustenance of troops and navies. If the communications with the frontier are not now sufficiently numerous and rapid, they will then necessarily and promptly be made so, by the public treasure and protection of the people. And if it be desirable, as a matter of pride or of

interest, to have this national establishment among us, Ohio, as the foremost of the Western States in population, in resources, and in exposure, has a fair claim to the preference.

In addition to what we have advanced in regard to the manufacture of articles of iron, we desire to call attention particularly to railroad iron. The benefits of railroads, and the profitableness of the stock, have become so obvious, that this description of road is now spreading in every direction. In the West especially, where the level surface of the country is so inviting, the distances to be overcome so great, the trade and the travel so vast, there seems to be no doubt that railroads will be very extensively constructed—especially if the government shall persevere in the churlish and absurd policy of refusing to improve the rivers.

The number of railroads already undertaken or projected, in the West, is so great, as to show that this form of improvement has met with decided favor, and will be widely adopted. A vast amount of railroad iron will be required, which we should endeavor to make at home, if practicable, and we think it would be obviously, not only practicable, but profitable, to manufacture it here.

Three years ago, scarcely any railroad iron was made in the United States—we believe, none; now it is made at not less than thirty different founderies, in several of the states, and in large quantities. The flat bar has been made at Cincinnati for the Little Miami, and the Indianopolis and Madison railroads; but no establishment here is prepared as yet to make the heavy rail. The American railroad iron is better than the English, by from $7 to $10 per ton; and the fact, that it is already made at so many different places, is conclusive that it may be profitably manufactured, even with the present protection. In the

disturbed condition of political affairs in Europe, now existing and which may unhappily long continue, their industry must in some degree be paralised, and the competition with our manufactures rendered less formidable.

While we are thus enabled to make this article, the demand for it is rapidly increasing, not only by the making of new lines of railroad; but by the necessity which all the existing roads which have used the flat rail, are under, of discarding that flimsy material, and renewing their tracks with the heavy rail. The demand is not local nor limited, but extended over the whole United States. The eastern factories will find full employment in supplying the roads near them; and we should begin to provide the means for meeting our own demand, at home.

There is no point at which railroad iron could be made, at this time, so advantageously as at Cincinnati. The demand for it here, for immediate use, will be large. The Little Miami railroad, now finished to Springfield, and the continuation of which to Sandusky will be completed by the 1st of June, 1848, will be relaid without delay, with the heavy rail:—and such is the immense business of the road now, and the rapidity of its increase, that a double track will be required to be commenced as soon as practicable. A branch of this road from Xenia to Columbus, the seat of the state government, has been commenced, and is to be finished within two years; and active measures are in operation for extending the road from Columbus to Cleveland. There will be a road also constructed, without delay, from Columbus to Pittsburgh, to unite with the great central railway from that place to Philadelphia—which will be the most direct, and in many respects the most eligible, of all the routes between the East and West. The Cincinnati and Belpre railroad,

a very desirable work, which will leave the Little Miami railroad, about forty miles from Cincinnati, and passing near Hillsboro', and through Chillicothe, will strike the Ohio at Belpre, with a view to a junction with the Baltimore and Ohio railroad. This road is so important to all the country lying along it, and to Chillicothe and Cincinnati, that it will undoubtedly be undertaken without delay. The road from Cincinnati to Hamilton is about to be commenced, and will be extended thence either to Dayton, or Richmond, and thence either north, to the lakes, or west, to Indianapolis. A railroad is loudly called for, and we think cannot be delayed, on the direct line between Cincinnati and St. Louis, by way of Vincennes; and there must soon be a railway from Cincinnati to Lexington. Some of these roads are in progress, all of them will be made eventually, and there will be many others connecting with them; while there will be others such as the Madison and Indianapolis railroad, that will connect with us by means of the river. There is now, therefore, a demand here, for railroad iron, which must rapidly increase, and become very large; and as the freight and carriage of so heavy an article adds materially to the expense, it is very desirable that it should be made on the spot.

We have shown that there is no place at which it can be made more profitably than this. We have the iron and coal of the best quality in abundance, at fair prices; and we have shown that our city abounds in facilities for manufacturing.

For the same reasons this will be a very suitable place for the manufacture of locomotive engines, and passenger and freight cars, for our western railroads. Several fine locomotives have already been constructed for the Little

Miami railroad, at the extensive engine shops of Mr. Anthony Harkness, in this city, and we hope that hereafter we shall not import any machinery of this description.

We have also facilities for the manufacture of cotton goods, which cannot fail to invite the attention of capitalists. We can manufacture here more cheaply than at Lowel, and we have the further advantage of having our fabrics, when made, at the market where, in either case, they must be sold. Cotton can be brought here from Tennessee and Mississippi, as cheaply as it can be taken to New Orleans, the freight being lower for the ascending than for the descending navigation, because there is less of it. The eastern manufacturer must pay the commission and expenses at New Orleans, which are not moderate, the freight and insurance coastwise, and the transportation to the place of manufacture, and then he must pay the transportation of his fabric to the Western market, together with commissions, exchange, &c.; all which we save. A careful enumeration of these items of difference, shows a saving to the manufacturer here of *nine* per cent., which would of itself be a fair profit. But this is not all; we can make and put up all kinds of machinery as well and as cheaply as at any place in the world; and the important items of fuel, house rent, and provisions, are cheaper here than at any thriving town on the Atlantic. The laborers will follow the work—wherever our cotton mills are erected we find hands enough seeking employment; and where living is cheap, wages cannot be high.

Cincinnati has lately become a cotton market. Large quantities have been brought here from Nashville, Memphis, Vicksburgh, &c., since the beginning of 1846, and sold to manufacturers at this place, Covington and New-

port, Kentucky, Dayton, Wellsburgh, Wheeling, Pittsburgh, and even at Rochester, New York.

In regard to this trade, we find the following remarks in the Cincinnati Gazette, of April 7, 1848:

"The rapid growth and present importance of the trade between Cincinnati and Memphis, Tennessee, cannot have escaped the notice of any of our more observing merchants. But even they, except in cases where they have particularly looked into the matter, can have but an inadequate idea of the extent with which the manufactures generally of this city are purchased for the district of country of which Memphis is the commercial inlet. The imports of about *forty counties* in Tennessee, Mississippi and Arkansas, reach the hands of the retailers and consumers through that city; and among these imports are considerable quantities of provisions from this city, and very large quantities of our manufactures. Payment for these articles comes to us chiefly in the shape of raw cotton, of which Cincinnati has for the past year or two been an important and fast growing market.

"If properly fostered, this trade may be made one of great importance to our city. The merchants of Memphis, and planters of the adjacent parts of Tennessee, we are well informed, are favorably disposed towards its extension; and arrangements are making, we understand, to run a semi-weekly line of packets between the two cities, during the summer season, when the facilities for transportation by New Orleans boats are not so good as in winter and spring."

Heavy articles of groceries, such as sugar, molasses, and coffee, are now shipped from this place through the canal to Buffalo, and other ports on the lake, and we have no doubt that we shall be able to supply all such articles

to the towns along the shores of the lakes, cheaper than they can be had from New York. When the railroad to Sandusky shall be completed, the facilities for intercourse with the lakes will be greatly increased.

CHAPTER XVIII.

Cincinnati—its resources, credit, and facilities for business.

The sound and well established credit of Cincinnati, and its actual wealth, afford abundant security that its apparent prosperity is not delusive, but substantial and permanent. The growth of the city, and the increase of its business, have been rapidly but steadily progressive. Depending almost wholly on its own resources, its growth has been healthy, and its condition is sound.

The founders of Cincinnati were not men of wealth; and the early settlers brought with them nothing but thrifty qualities and buoyant hopes. They lived economically, and suffered many privations with patience, always looking forward to the future for their remuneration. But though fully aware of the local advantages of their position, and of the vast natural resources of the country around them, and sanguine in their expectations, it was fortunate for them and their posterity that they were not able to inspire others with the same bright visions, and that, consequently, they did not enjoy a high credit; and that spirit of speculation, in which all our countrymen are so prone to indulge, did not receive much encouragement.

The above remark is intended as a general proposition, from which an exception must be made, in reference to a disastrous period, commencing about the year 1808, and

extending to 1818, when several banks having been established with insufficient capital, with an almost unlimited power of issue, and without those restrictions which experience has since proved so necessary, a short period of improvident banking and wild speculation ensued, which proved disastrous to the city, and ruinous to all engaged in it. Cincinnati was then a small place, and these events are only important now, in its commercial history, from the lesson they impart. Since then, through a period of nearly thirty years, its progress has been as steady as it has been rapid, and its business has been as sound as it has been prosperous.

It is a fact, not to be disputed, that this city has suffered less than most others, perhaps less than any other, from the recent disastrous vicissitudes of business in the United States. The mercantile failures have been few and unimportant, our manufactures have been steadily maintained, and the general prosperity of the city has been uninterrupted.

The calamitous crisis in the monetary affairs of the country, which occurred in 1837–8, will long be remembered by all who were engaged, at that eventful period, in mercantile affairs. Intoxicated by a season of prosperity, and stimulated by the unwise prodigality of the Bank of the United States, not only the commercial class, but the whole people, rushed madly into the wildest speculations. Credit was every where substituted for money; the most magnificent schemes were undertaken, without present or prospective resources; and promises to pay at a future time were as improvidently received, as they were recklessly made. The extravagant and thoughtless employment of credit was not confined to merchants and monied institutions, though upon them was cast the odium,

and upon them chiefly fell the calamitous results that flowed from it. States and counties, cities and towns,—even churches, benevolent, religious, and literary societies, fearlessly issued their bonds, and expended the proceeds with a liberal hand. It was the mania of the times—not the vice of any political party, or class of society. The reaction was violent, and convulsed the whole business community. Demagogues, who attain a temporary elevation at such times, as corrupt substances rise to the surface in the chemical process of fermentation, exaggerated and distorted the evil; ignorance and prejudice were appealed to; and an indiscriminate war upon commerce, credit, and banks, brought upon the country years of loss and disgrace, and upon thousands of individuals utter ruin. Never, in the history of our country, has party spirit raged with such ruthless violence; never was its legislation marked by so gross a destitution of principle, or so utter a disregard of the rights and interests of individuals.

Throughout the whole of that period of general disaster, while gloom and bankruptcy pervaded most of the commercial cities, the growth of Cincinnati was progressive. The number of houses erected, in 1839, was three hundred and ninety-four, which was greater than any former year; the number in 1840, was four hundred and six; and in 1841, it swelled to eight hundred and twenty-seven. During the same same period, there were built annually at this port, about thirty-three steamboats, worth, at an average of over $18,000 each, about $600,000. The increase of population, and the expenditures for public improvements, have kept pace with these signs of individual prosperity.

The soundness and stability of the business of this city may be further shown, by referring to some of its banking

operations during the period last alluded to. In 1837, there were four banks in Cincinnati with each $1,000,000 of capital, and the Miami Exporting Company with $296,225. In May, 1837, the entire resources for business of those banks, including in the line of deposits the amount due to the government of the United States, were as follows:

Capital, - - - -	$4,296,225
Circulation, - - - -	2,422,217
Deposits, - - - - -	5,558,844
Other liabilities, - - -	1,308,372
Total, - -	$13,585,658

At that time the population of Cincinnati was not more than fifty thousand; the present number of inhabitants is not less than one hundred thousand, and the business of the city has more than doubled, yet the banking capital and resources, under the stringent legislation of our general assembly, in relation to all banks, but especially towards those of the commercial metropolis of the state, has dwindled down, to the aggregate shown by the following figures, taken from the report of the auditor of state, for May, 1847:

Capital, - - - -	$1,640,026
Circulation, - - - -	1,037,046
Deposits, - - - -	1,787,836
Other liabilities, - - - -	1,125,300
Total, - - -	$5,590,208

Recapitulation.

Banking resources in May, 1837, -	$13,585,658
do do in May, 1847, - -	5,590,208
Reductions, - -	$7,995,450

Here it will be seen that in the last ten years the mone-

tary facilities of the city have been reduced by considerably more than one-half, while the population and business has more than doubled. This effect has been produced by the disgraceful violence which has marked the contest for power between the political parties of the state, both of which have proved equally hostile to banks, and alike careless of the great interests of commerce; as in countries where anarchy prevails, the weak and peaceful are plundered by all who carry weapons. Within the period above mentioned, two of our largest banks have gone out of existence, their circulation has been taken up, and their capitals, two millions of dollars, owned mostly out of the state, have been withdrawn. Another important institution has been deprived of the power to issue notes, and a fourth has found it necessary to diminish its capital. Within the same period, the bank of the United States, having closed its branch in 1836, has withdrawn the capital which had been employed here. Thus in place of an incorporated banking capital of $4,296,225, the amount now authorised by law is $1,640,026, while the circulation, deposits, and other resources, are proportionably diminished.

We admit that the banking capital of 1837 was somewhat too large. It was not too great if viewed in proportion to the amounts similarly employed in other cities, and in the country at large, at that time, when there was a tendency to exaggeration in the public mind, and in the commercial affairs of the whole land; but it was greater than would be authorised by the more sober policy which has since prevailed. It is obvious, however, that abundant as the banking facilities then were, they were not abused to any great or pernicious extent. The banks were honestly and safely administered, their facilities fairly

distributed, and their engagements punctually met—except in the single matter of paying specie for their notes, when all other banks had, by common consent, suspended payment in that form—which was continued however by one of the Cincinnati banks.

But my chief object, in these remarks, is to show the soundness of the business done here, and the healthy and vigorous nature of our commercial resources. The employment of thirteen and a half millions of banking capital, in so small a city as Cincinnati, in 1837, would naturally stimulate business to its utmost limit, and lead to overtrading; and that it did not do so, to a ruinous extent, proves that the banks were well and honestly managed, and that the natural resources of the city, and its capacity for business, were capable of extension, and afforded large facilities for the safe employment of money. Both money and credit, to be used successfully, must be employed in real business transactions, in which, as a general rule, all the parties engaged realise profits. If the business be fictitious—if it be visionary, leading to no salutary result—if it be of a gambling character, depending on uncertain chances, or in which the gain made by one party must be lost by the other, the general result must be disastrous—commercial insolvency and the ruin of banks, must be the consequence.

But in regard to Cincinnati, it is historically true, and cannot now be contradicted, that it grew and flourished throughout the dangerous prosperity of an inflated currency, and abundant credit, and has equally grown and prospered under a contracted currency, a withdrawal of foreign capital, and an almost unexampled reduction of banking facilities. Is it to be inferred hence, that banking institutions are unimportant? We think not; Cincinnati has had the advantage

of them, throughout the whole period alluded to, and is greatly indebted to them for her uninterrupted prosperity, and to those who have directed them, for the fairness with which they have been administered. Business cannot be conducted without money, nor can large monetary concerns be advantageously carried on without banks. The fair inference from the facts is, that the great advantages of Cincinnati, in its geographical position, and the vast natural wealth and abundant resources of the country trading with it, furnish the elements of so vigorous a business, as to render it somewhat independent of artificial facilities. So long as the products of a vast region, of unrivaled fertility, flow here for sale, as to a common centre, by an attraction almost as strong and as natural as that of gravitation, money will come to purchase it. The want of banks would not separate the parties, whose mutual wishes and interests would bring them together, but it would render their intercourse less convenient and less profitable.

The proposition, which we have attempted to sustain, may be more concisely and more conclusively supported by the following exhibit of the maximum and minimum circulations of our banks, for one year:

MAXIMUM.

Ohio L. Ins. & T. Co.,	Dec. 31, 1838,	$967,915
Franklin Bank,	Jan. 3, 1839,	603,637
Fafayette Bank,	Jan. 17, 1839,	576,111
Commercial Bank,	Feb. 18, 1839,	1,599,261
Total,		$3,746,924

MINIMUM.

Ohio L. Ins. & T. Co.,	Dec. 27, 1839,	$210,829
Franklin Bank,	Dec. 28, 1839,	58,342
Lafayette Bank,	Dec. 26, 1839,	39,865
Commercial Bank,	Dec. 28, 1839,	161,695
Total,		$470,731

Thus it appears that the circulation of our four banks amounted, at the commencement of 1839, to $3,746,924; and at the close of that year to but $470,731, showing a reduction within that year of $3,276,193, the chief part of which must have been curtailed from the active business of the city. The fact that this immense amount was deducted in one year, from the business capital of the city, without producing bankruptcies, and the promptness with which the banks in so short a period redeemed nearly their whole circulation, form conclusive proofs that our money operations were based on a sound and healthy business, and that our mechanics and merchants sustain a high commercial character.

Several causes have been already suggested, as conducing to the stability with which this city has sustained itself during the general depression of business; another important reason will be now briefly alluded to.

The business of Cincinnati is directed through so many channels, that the general prosperity is not readily affected by any single or sudden cause. The three great interests of commerce, manufactures, and the produce business, divide the wealth and industry of our citizens. It seldom happens that all these interests are paralysed at the same time, and when one of them is depressed, there is usually a sustaining power remaining in the others. In this respect we differ from a mere manufacturing town, or from one depending chiefly on commerce, or on the trade in domestic produce.

Cincinnati is undoubtedly the largest provision market in the world: the greatest mart for those raw productions of the soil which constitute the food of man and of domestic animals. The vast area of fertile country, of which it is the commercial metropolis, produces the great

staples of wheat, Indian corn, rye, barley, oats and buckwheat, together with hogs and cattle, in vast quantities, and of unsurpassed excellence. All these flow to our warehouses, and are here consumed, sold or shipped to distant markets, either in the crude state, or in the form of flour, meal, beef, pork, bacon, lard, whisky, &c. But these are not all—and those who consider Cincinnati as merely a great pork and flour market, are greatly in error; for such is the unlimited capacity of our soil for production, the geniality of our climate, and the consequent redundancy of the agricultural products, that our farmers are constantly invited to seek new articles for cultivation, and a market has been created here for those minor products of the farm, which in some countries are consumed at home, and in others not produced. Potatoes, onions, beans, apples, dried fruits, butter, cheese, tallow, eggs, poultry, honey, beeswax, cider, feathers, hay—linseed, castor and lard oils—all, in short, of the numerous articles falling within the same category, are here, not merely in the daily market for the supply of our population, but in immense masses for exportation. We may mention, in illustration of this subject, that **eggs* are exported from this city to New Orleans, to an amount exceeding *one hundred thousand dollars* per annum; and of many other articles equally insignificant, the value of the shipments

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*Not long since, on board a steamboat on the Hudson river, the writer met a citizen of Cincinnati, returning from Boston, where he had been selling a large lot of *fresh eggs*. They were taken from Cincinnati, by canal and the lake, to Buffalo, and thence by railroad to Boston, where they were very profitably sold. When our railroad shall be finished, we shall supply our eastern friends with fresh beef, mutton, poultry, game, and many other luxuries for the table, in exchange for their fish and oysters.

are proportionally great. Some of these articles do not appear in the reported lists of exports and imports, and others are very inadequately enumerated; so that they are not usually taken into view, in forming an estimate of our business, of which they form, when summed up, a very imposing item.

And, in this place, it may be proper to mention a great variety of small manufactures which are incidental to the produce market. Where four hundred and seventy-five thousand hogs, and a proportionable number of beef cattle, are slaughtered, cut up, and packed in a year, the offal, that is usually given away, or thrown away, becomes valuable from the largeness of the quantity, and all this is turned to account by our enterprising citizens. Our hides are tanned, and our leather converted into saddlery, harness, trunks, and all the various fabrics of that material. Soap and candle manufactories absorb every particle of cheap matter containing grease. Our bristles are made into brushes; hoofs, horns and bones are boiled down into glue; buttons, combs, various oils, and other articles too numerous to be specified, are fabricated by our ingenious workmen. So we have also our large manufactories of bread, biscuit, starch, salaratus, white lead, spirits, ale, porter, alcohol, acids, colors, and patent medicines. The list of these and of kindred fabrics, made at our numerous workshops, would be interminable; we make almost every thing, and without the fear of contradiction, claim to stand in the first rank of American manufacturing towns, as well from the variety and excellence of our fabrics, as from their aggregate annual value.

The most important of our manufactories are those in iron, and other metals. Our founderies and engine shops employ nearly one thousand hands, and little less than a

million of dollars capital. These are chiefly engaged in making engines and machinery to be used in steamboats, water works, mills, sugar making, cotton factories, &c. Our blacksmith shops employ several hundred hands, besides which we have a numerous body of cutlers, edge-tool makers, machinists, and gun-smiths. Distinct from those again, are our rolling mills, sheet iron workers, wire makers, and wire workers. Iron safes, balustrades, printing presses, locomotives, and fire engines, may be added—and still there would remain a vast list of fabrics of iron, "such as no man can number," unless he is more familiar with the subject than we are. We have one establishment, in which butt hinges, bolts, locks, and many other articles are most ingeniously made of cast iron, with a wonderful simplicity and beauty of workmanship. The manufacture of stoves is also deserving of separate mention—from the great quantity that are made, the variety of their uses and patterns, their excellence, and high finish. We have *twenty* establishments, at which *three tons* of stoves are made per day, or one thousand tons per year—including every size and variety, from the largest cooking stoves, by which a dinner may be prepared for the ordinary of a hotel, down to the miniature affair, whereby the shivering student may warm his closet with a handful of charcoal. They are made both of cast and sheet iron. The castings are remarkably light and smooth, and the patterns, continually varied and improved, are not excelled any where in beauty. Grates for burning coal are also made here in large quantities, of every size and of the best finish and quality. The whole capital employed in fabrics of iron is not less than $2,500,000.

In other metals than iron, somewhat less than a million of capital is employed by bell and brass founders, brit-

tannia ware factors, copper, brass, sheet iron, and tin plate workers, jewelers and silver smiths, lock makers, plumbers, and type founders.

Manufacturers in wood, such as ship carpenters, house and job carpenters, cabinet makers, chair makers, carriage makers, plane makers, picture frame and looking-glass makers, planing machines, turners, wagon and cart makers, pump and block makers, &c., employ $2,500,000. The articles of furniture, chairs, carriages, wagons, ploughs, &c., made here, embrace a vast variety of costly, as well as useful fabrics, for exportation, made in the best style.

Factories for spinning and weaving cotton, for making hempen bagging, and bale rope, carpets, oil cloth, coach lace and fringe, rope walks, dyeing establishments, fulling and carding machines, &c., are carried on upon a large scale, employing considerably over $500,000. A large cotton factory, erected within the last three years, with all the modern improvements in machinery, is one of the finest and most complete in the United States, and has been eminently successful.

The manufacture and preparation of various drugs, paints, oils, acids, and chemicals, employs about $500,000 of capital.

Paper, books, newspapers, blank books, stationery, binding, band boxes, and wall paper, employ a manufacturing capital of $750,000. The publication of bibles, testaments, school books, and religious works, forms here an incredibly large business. These works are as well printed and got up as those of the eastern cities, and are sold as low. Within the last year, one hundred and forty thousand copies of an English grammer have been printed and sold in this city, and other school works in proportion.

We have about ninety tailors, who employ between two and three hundred journeymen, besides one hundred slop shops and clothing stores, with nearly one thousand journeymen. These establishments are said to give employment to nearly four thousand women, who sew at their own homes; and the annual products of their labor is said to amount to $1,500,000.

Brewers, distillers, bakers, and confectioners, form another large class, employing many hands, and wielding a very considerable capital.

If we include the packers of pork and beef, butchers, sausage makers, and millers, in the list of manufacturers, there would be added to this branch of industry, a capital of more than $5,000,000.

We must close this account, by adding a miscellaneous list, such as hatters, and importers of hats, caps, and furs, and tobacconists, both of which branches are very largely carried on, employing together a capital of more than $500,000—clock makers, glass cutters, jappanery, last and sparable factory, machine cards, stock and portable burr mill stones, malsters, printing ink maker, tallow renderer, vinegar factory, powder mill, makers of matches, hooks and eyes, steel pens, diamond pointed pens, copper plate engravers, wood engravers, xylographic and lithographic printing, draughtsmen and designers, artists, mathematical, optical and philosophical instrument makers, surgical instrument makers, medical instrument makers, stucco workers, &c., &c., &c.

All these, as we have elsewhere stated, were estimated in 1841, to amount to the annual value of $17,432,670; and as our population has increased since then from sixty thousand to one hundred thousand, and our business of all kinds has swelled even more largely, we may safely

put our manufactures down at from $25,000,000 to $30,000,000.

The commerce of Cincinnati, in its largest sense, would include all imports and exports, purchases and sales, as well of produce, and of raw materials for manufacture, as of the products of those branches; but it embraces also, in a stricter sense, importations and sales of dry goods, fancy goods, hardware, groceries, and a vast variety of merchandise, the growth or manufacture of other parts of the United States, or of foreign countries, which are distributed here for the consumption of a vast area of country around. It would be impossible to state the value of our commerce, separately from the other interests with which it is connected, unless the whole were reduced systematically to figures—a very desirable work, which we hope will be undertaken by our Chamber of Commerce.

We have adverted, in another place, to the favorable position of Cincinnati, as a point from which mechanical products may be distributed widely, and with unrivaled facility. The ease with which this place may be approached from various directions, and its commanding position in reference to the resources of the country, no doubt led to its selection as a military post, the head quarters of the army under several successive commanders, and its occupation by the earliest settlers as a place of residence. It was, previously, a great crossing-place, used by the Indians, in passing over the Ohio, and several paths extending far into the interior, in different directions, centred here—a proof that the natural avenues, destined to become the arteries of commerce, and the channels for the intercourse of civilized society, flowed here spontaneously. These have been judiciously improved, by the liberality of the state, and the enterprise of Cincinnati, in

the construction of roads and canals, which, following the topographical indications, tend to this point, as to a common centre. The same facility of intercourse which brings us so readily into contact with a vast agricultural region, as the natural emporium for the sale of their products, enables us to distribute, with eminent advantage, the fabrics of our workshops, and the merchandise of foreign lands.

We have, therefore, arrived at the position of a large wholesale emporium for foreign merchandise. Our extensive jobbing and wholesale houses can now supply to country merchants complete assortments of dry goods, hardware, groceries, drugs, fancy goods, and most other articles of foreign growth or fabric, as cheaply as they can be purchased in the Atlantic cities. The stocks kept here are very large, and many of the goods are imported directly from foreign ports.

The Western people are valuable customers. They live well, and buy liberally. They are able to enjoy, not only all the necessaries, but as many of the luxuries of life, as are reasonably desirable. As a general rule they pay no rent, their civil burthens are light, and their fields produce abundantly. The farmers of this region have enjoyed an almost uninterrupted prosperity for many years. Their crops, that cost them little beyond their own labor, that grow while they sleep, as well as while they wake, and yield equally whether rule or misrule prevail in the state—have brought good prices; and as the farmer sells for cash, the vicissitudes of commerce do not reach him directly nor ruinously;—they may reduce his gains, but they cannot blight his fortunes. When banks and merchants break, he is safe. For years past, our farmers have been growing rich. Surrounded by abundance, they live com-

fortably, yet they are sober, frugal, and in no respect extravagant. I doubt whether any other agricultural population in the world live so well, or exchange so large a portion of their earnings for the products of foreign lands, and the luxuries of life, without prodigality or dissipation. The market from which such a population draw their supplies, and to which they carry their produce, must necessarily be large; and it must also be the centre for the deposit, exchange, and circulation of vast amounts of ready money. And this is true of Cincinnati, which is sustained not only by great enterprise and energy on the part of her own citizens; but by a very numerous, wealthy, and industrious, surrounding population.

Nearly all our products for export, both agricultural and mechanical, are articles of common use and necessity, the demand for which is steady, and but little affected by the scarcity of money. Prices may be reduced, but our pork, beef, and flour—our fabrics of iron, wood, &c., must always be in demand, because life cannot be sustained comfortably without them, and we can furnish them cheaper than others. Our mechanics are numerous, employing a few hands each, and not using borrowed capital.

We close this imperfect account of the business, and capacities for business, of our city, with the following detailed statement of its imports and exports for the year ending August 31, 1847,—extracted from the annual report to the Cincinnati Chamber of Commerce, by Mr. A. Peabody, superintendent of the Merchant's Exchange.

With the end of August, 1847, terminated the first year of the existence of the Merchants' Exchange, under its present organization.

This is, also, the first year in which an effort has been made to keep a full record of the commerce of the city, and although minor errors and omissions must necessarily result from the manner in which the facts relative to the river commerce are obtained, the omissions would not, to any important extent, affect the aggregate. Their influence, however, as far as it extends, is to lessen the exhibit of the trade of the city.

Appended is a list, made up from the daily records at the Exchange, of the aggregate receipts in Cincinnati, by river, canals, and railroad, for the year commencing September 1st, 1846, and ending August 31st, 1847, inclusive.

RECEIPTS IN CINCINNATI, by River, Canals, and Railroad, for the year commencing September 1st, 1846, and ending August 31st, 1847, inclusive.

		Quantity.	Value.	Amount.
BREADSTUFFS—				
Flour,	brls.	512,506	$2,111,624 72	
Corn meal,	bush.	56,775	39,034 00	
Wheat,	do	590,809	472,647 20	
Corn,	do.	896,258	403,316 01	
Oats,	do.	372,127	130,244 45	
Rye,	do.	41,016	18,457 20	
Barley,	do.	79,394	38,109 12	
				$ 3,213,432 79
PROVISIONS—				
Beef,	bbls. & tcs.	191	1,741 50	
Pork and bacon,	hhds.	5,476		
do. do.	tcs.	124		
do. do.	brls.	40,581		
do. in bulk,	lbs.	8,027,399	1,062,232 94	
Lard,	brls.	21,991		
do.	kegs.	22,722	388,080 23	
Hogs,	No.	38,774	310,192 00	
Tallow,	brls.	1,748	40,680 00	
				1,801,185 17
DAIRY PRODUCTS—				
Butter,	brls.	6,345		
do.	kegs.	9,070	185,302 50	
Cheese,	casks.	483		
do.	bxs.	120,301	38,724 28	
				224,026 78
FRUITS, Domestic—				
Apples (green)	brls.	26,992	51,284 80	
Dried Fruits,	bush.	82,871	62,153 25	
Lemons, (Foreign)	bxs.	2,185	5,382 50	
Oranges,	do.	4,137	12,411 00	
Raisins,	do.	11,990	33,980 00	
				165,211 55
NAVAL STORES—				
Oakum,	brls.	1,100	4,125 00	
Rosin, pitch & tar,	do.	5,004	15,012 00	
				19,137 00
SUNDRY PRODUCE—				
Beans,	brls.	11,768	35,304 00	
Bran, shorts, &c.	sks.	14,594	7,297 00	
Eggs,	brls.	3,561	24,927 00	
Feathers,	sks.	2,767	37,354 50	
Grease,	brls.	482	5,422 00	
Hay,	bls.	7,049	10,575 00	

	Quantity.	Value.	Amount.
SUNDRY PRODUCE—			
Hops, brls.	1,064	$18,620 00	
Malt, bush.	12,562	8,165 30	
Potatoes, brls.	15,829	12,663 00	
Seed, flax, brls.	25,753	77,259 00	
do. grass, brls.	4,964	49,640 00	
			287,227 50
LIQUORS, dis. and fer.			
Whiskey, brls.	184,639	1,361,328 60	
Cider, do.	3,261	8,152 50	
Sundry liquors, pps. &c.	3,369	421,125 00	
Wines, brls. & qr. cks.	4,006		
do. bskts. and bxs.	1,419	124,435 00	
			1,915,041 10
HIDES AND LEATHER—			
Hides, No.	24,376	39,461 00	
do. lbs.	7,513	262 96	
Leather, bdls.	5,069	329,845 00	
			369,208 96
METALS—			
Blooms, tons.	2,017	121,020 00	
Iron and steel, pcs.	188,125		
do. do. bdls.	34,463		
do. do. tons.	1,685	641,864 50	
Pig Iron, tons.	15,808	474,240 00	
Lead, pigs.	43,675	107,003 75	
Nails, kegs	54,918	219,672 00	
Shot, do.	1,118	15,093 00	
			1,578,893 25
SUNDRIES—			
Bagging, pcs.	5,561	69,553 00	
Cooperage, do.	186,186	93,093 00	
Candles, bxs.	207	165,600 00	
Cotton, bls.	12,528	563,760 00	
Glass, bxs.	18,002	54,006 00	
Glassware, pkgs.	17,121	102,726 00	
Hemp, bls.	26,678	293,458 00	
Lime, brls.	32,016	24,012 00	
Oil, sundry, brls.	5,563	111,260 00	
Oil cake,	2,225,988	9,460 50	
Rope, twine, &c. pkgs.	8,002	40,010 00	
Salts, sacks.	56,292		
do. brls.	124,360	212,724 00	
Tobacco, hhds.	6,200		
do. brls.	822		
do. bxs. & kegs.	9,241	442,320 00	
Wool, bales.	2,960	129,500 00	
Yarn, cotton, lbs.	827,011	140,591 87	1,852,072 37

	Quantity.	Value.	Amount.
GROCERIES—			
Coffee sacks,	59,337	$712,044 00	
Codfish, drms.	292	7,008 00	
Sundry fish, brls.	18,836		
do. kegs & kits.	2,142	147,390 00	
Herrings, bxs.	1,603	801 50	
Molasses, brls.	27,216	326,595 00	
Pimento & pepper, bgs	3,180	39,750 00	
Rice, tcs.	1,145	34,350 00	
Sugar, hhds.	16,669		
do. brls.	7,196		
do. bxs.	5,177	1,503,072 00	
Tea, pkgs.	4,443	163,290 00	
			2,934,300 50
MERCHANDISE—			
Sundry pkgs.	263,944		
do. *tons.	7,941	34,335,400 00	34,335,400 00
In addition to the above there have arrived—			
Bark, cords.	2,000	18,000 00	
Coal, bush.	2,600,00	214,500 00	
Wood, cords.	51,660	180,810 00	
Building & grindstones		10,000 00	
Sawed lumber, feet.	40000000	440,000 00	
Shingles,	55000000	123,750 00	
Logs,		250,000 00	
Staves,	3,512,000	35,120 00	
Hoop poles,	2,227,000	24,497 00	
This amount added to the aggregate above make the entire receipts by public conveyance of articles embrac'd in the comm'rce and trade of the city,			1,296,677 00
			$49,991,833 97
Among the receipts are shown 30,774 hogs, to this should be added 212,000 head which arrived by land, worth,		1,096,000 00	
Also, 9,300 beeves,		232,500 00	

*The quantity of merchandise has been given in tons, only when the number of packages could not be ascertained. This item embraces all articles of groceries, hardware, crockery, drugs, dry goods, and every description of goods not specifically mentioned.

The EXPORTS OF THE CITY, for the year ending August 31st, 1847, as shown by the daily records of the Exchange, were as follows:

		Quantity.	Value.	Amount.
BREADSTUFFS—				
Flour,	brls.	581,920	$2,538,626 00	
Corn meal,	brls.	88,882	266,646 00	
Corn,	sacks.	258,198	322,747 50	
Oats,	sacks.	140,067	140,067 00	
				$3,268,086 50
PROVISIONS—				
Beef,	brls.	10,367		
do.	tcs.	7,970	200,898 00	
Pork & bacon,	hhds.	31,538		
do. do.	brls.	137,218		
do. do.	tcs.	7,894		
do. in bulk,	lbs.	3,478,856	3,238,452 14	
Lard,	brls.	49,878		
do.	kegs.	150,823	1,183,623 03	
Tallow,	brls.	4,543	9,960 00	
				4,632,033 17
LIVE STOCK—				
Beeves,	head.	872	21,800 00	
Horses,	do.	2,026	151,950 00	
Sheep,	do.	726	1,452 00	
				175,202 00
DAIRY PRODUCTS—				
Butter,	brls.	1,348		
do.	kegs.	31,194	218,490 00	
Cheese,	casks.	1,132		
do.	bxs.	70,104	215,612 01	
				434,102 01
SUNDRY PRODUCE—				
Apples (green)	brls.	14,444	22,708 35	
Beans,	brls.	3,782	11,346 00	
Bran, shorts, &c.	sks.	3,842	1,920 00	
Dr'd ap'ls & peach's	bu	16,077	16,077 00	
Eggs,	brls.	10,308	82,464 00	
Feathers,	sks.	4,100	61,500 00	
Grease,	brls.	694	8,328 00	
Hay,	bls.	357	981 00	
Potatoes,	brls.	34,130	34,130 00	
Sund. veg. & fruits,	brls.	17,879	71,516 00	
Seed, flax,	brls.	291	876 00	
do. grass,	brls.	3,967	55,538 00	
				367,384 35
LIQUORS, distilled & fer'd				
Whiskey,	brls.	183,928	1,361,067 20	

	Quantity.	Value.	Amount.
LIQUORS, distilled & fer'd			
Alcohol, brls.	1,843	$24,880 50	
Sundry, embracing cider, beer, &c. brls.	7,198	251,930 00	
			1,637,877 70
METALS—			
Iron, pcs.	68,905		
do. bdls.	9,389		
do. tons.	5,646	543,026 50	543,026 50
SUNDRIES—			
Brooms, doz.	5,408	8,112 00	
Bagging, pieces.	8,867	129,400 00	
Candles, bxs.	16,662	104,137 50	
Cotton, bales.	5,019	225,855 00	
Cooperage, pieces.	42,121	42,121 00	
Hemp, bales.	8,783	110,070 88	
Hides, lbs.	164,930		
do. no.	12,444	29,929 70	
Lard oil, brls.	6,199	185,970 00	
Oil cake, tons.	5,246	157,380 00	
Rope, twine, &c. pkgs.	8,723	52,338 00	
Soap, bxs.	10,080	30,240 00	
Salt, brls.	65,346		
do. sacks.	4,413	86,096 00	
Tobacco, hhds.	6,011		
do. bxs.	9,718		
do. bales.	277	390,700 00	
Linseed oil, brls.	6,032	150,800 00	
Vinegar, brls.	3,884	12,623 00	
Wool, lbs.	465,810	119,148 30	
Sundry mdse., pkgs.	234,951		
do. do. tons.	18,179		
do. manufactures,	22,261	42,250,975 00	
			44,085,897 04
GROCERIES—			
Coffee, sacks.	13,037	169,481 00	
Molasses, brls.	9,046	117,598 00	
Sugar, hhds.	4,998	399,840 00	
			686,919 00
LUMBER, COAL & COKE—			
Boards, feet.	2,300,000	25,300 00	
Lath, no.	167,000	3,340 00	
Shingles, do.	8,630	19,418 00	
Staves, do.	38,000	380 00	
Hoop poles, do.	398,000	4,378 00	
Coal, bush.	151,000	15,100 00	
Grindstones, &c.		5,150 00	

		Quantity.	Value.	Amount.
Coke and Bark—				
Coke,	bush.	23,400	$4,680 00	
Bark,	cords.	218	2,180 00	
				79,926 00
				$55,735,252 27

The aggregate of imports and exports by public conveyance thus shown, amounts, it will be seen, to $105,727,086 24

And this, increased by two items, (hogs and beeves,) which arrived by land, 1,328,500 00

$107,055,586 24

The amount and character of the tonnage, employed in the commerce of the city, will appear from the following:

The number of steamboats arrived in the last year,	3,729
Ditto of flatboats,	3,336

The freights of flatboats arrived, were as follows:

Loads of wood,	1,636
Do. coal,	466
Do. of other articles, embracing Staves, Hooppoles, Bark, Stone, Stoneware, Lumber, Iron, Salt, Produce, &c.	1,228
Total,	3,330

The number of flatboats which have departed from the city, laden with provisions and produce, is about 700

About two-thirds of the receipts of wood (1,636 boat loads) are on boats which are towed back. Deducting these, and those forwarded with produce, leaves 1,800 boats to be otherwise disposed of, a large share of which are sold for lumber, and for this purpose sell, on an average, for about $20 each; those sold to be covered and laden for the south bring higher rates, ranging from 90 cents to $1 75 per foot, according to supply and demand, but generally below $1 25—this year perhaps above.

The average cost of a boat, covered suitably for a load of produce, is about $2 25.

In comparing the number and tonnage of steamboats built and registered here, during the last two years, commencing September 1st and ending August 31st, a decided increase is manifest.

In 1846–7,	Number,	32	Tonnage,	8,268
" 1845–6,	"	25	"	5,657
	Increase,	7		2,611

END.